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  File 135:NewsRx Weekly Reports 1995-2007/Dec W5
        (c) 2007 NewsRx
  File 144:Pascal 1973-2006/Dec W1
        (c) 2006 INIST/CNRS
  File 149:TGG Health&Wellness DB(SM) 1976-2007/Dec W4
        (c) 2007 The Gale Group
  File 156:ToxFile 1965-2006/Nov W1
        (c) format only 2006 Dialog
*File 156: ToxFile has stopped updating with MEDLINE records. Please
see HELP NEWS 154 for details.
  File 159:Cancerlit 1975-2002/Oct
        (c) format only 2002 Dialog
*File 159: Cancerlit is no longer updating.
Please see HELP NEWS159.
  File 162:Global Health 1983-2007/Dec
        (c) 2007 CAB International
  File 164:Allied & Complementary Medicine 1984-2007/Jan
        (c) 2007 BLHCIS
  File 172:EMBASE Alert 2007/Jan 09
        (c) 2007 Elsevier B.V.
  File 266:FEDRIP 2006/Dec
       Comp & dist by NTIS, Intl Copyright All Rights Res
  File 369:New Scientist 1994-2007/Oct W2
        (c) 2007 Reed Business Information Ltd.
  File 370:Science 1996-1999/Jul W3
        (c) 1999 AAAS
*File 370: This file is closed (no updates). Use File 47 for more current
information.
  File 399:CA SEARCH(R) 1967-2007/UD=14603
        (c) 2007 American Chemical Society
*File 399: Use is subject to the terms of your user/customer agreement.
IPCR/8 classification codes now searchable as IC=. See HELP NEWSIPCR.
  File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
        (c) 2006 The Thomson Corp
  File 444:New England Journal of Med. 1985-2007/Dec W4
        (c) 2007 Mass. Med. Soc.
  File 467:ExtraMED(tm) 2000/Dec
        (c) 2001 Informania Ltd.
  File 123:CLAIMS(R)/Current Legal Status 1980-2007/Jan 02
        (c) 2007 IFI/CLAIMS
*File 123: Reassignment data is now updated weekly.
  File 324:German Patents Fulltext 1967-200701
        (c) 2007 Univentio
*File 324: For important information about IPCR/8 and forthcoming
changes to the IC= index, see HELP NEWS IPCR.
  File 331:Derwent WPI First View    UD=200702 (c) 2007 The Thomson Corp.
*File 331: For patent family information, search also File 351, 352,
or 350.
  File 340:CLAIMS(R)/US Patent 1950-07/Jan 04
        (c) 2007 IFI/CLAIMS(R)
*File 340: The 2006 reload is online as of December 1, 2006.
IPCR/8 is available.
  File 342:Derwent Patents Citation Indx 1978-07/200682
        (c)2007 The Thomson Corp.
  File 344:Chinese Patents Abs Jan 1985-2006/Jan
        (c) 2006 European Patent Office
  File 345:Inpadoc/Fam.& Legal Stat 1968-2006/UD=200701
        (c) 2007 EPO
  File 347:JAPIO Dec 1976-2006/Sep(Updated 061230)
        (c) 2007 JPO & JAPIO
  File 348:EUROPEAN PATENTS 1978-2006/ 200701
        (c) 2007 European Patent Office
*File 348: For important information about IPCR/8 and forthcoming
changes to the IC= index, see HELP NEWSIPCR.
  File 349:PCT FULLTEXT 1979-2006/UB=20070104UT=20061228
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        (c) 2007 WIPO/Thomson
*File 349: For important information about IPCR/8 and forthcoming
changes to the IC= index, see HELP NEWSIPCR.
  File 353:Ei EnCompassPat(TM) 1964-200701
        (c) 2007 Elsevier Eng. Info. Inc.
*File 353: Ei EnCompassPat/Ei EnCompassLit combined usage is
limited to 2 hrs/yr.
  File 371:French Patents 1961-2002/BOPI 200209
        (c) 2002 INPI.  All rts. reserv.
*File 371: This file is not currently updating. The last update is 200209.
  File 447:IMS Patent Focus 2006/Sep
        (c) 2006 IMS Health & Affiliates
  File 652:US Patents Fulltext 1971-1975
        (c) format only 2002 Dialog
  File 654:US Pat.Full. 1976-2007/Jan 04
        (c) Format only 2007 Dialog
*File 654: IPCR/8 classification codes now searchable in 2006 records.
For information about IC= index changes, see HELP NEWSIPCR.
  File 670:LitAlert 1973-2007/UD=200615A
        (c) 2007 The Thomson Corp.

      Set  Items  Description
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? e anca

Ref    Items    RT  Index-term
E1     18310     7 *ANCA
E2         1       ANCA A NEW TABLE GRAPE-D CULTIVAR
E3         2       ANCA AND VASCULITIS
E4         5       ANCA ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODIES
E5         5       ANCA ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODY
E6         2       ANCA ANTI-NEUTROPHIL CYTOPLASMIC AUTOANTIBODY
E7         1       ANCA ANTIBODIES
E8         2       ANCA ANTIBODY
E9         1       ANCA ANTIBODY ANTI NEUTROPHIL CYTOPLASMIC ANTI
E10        3       ANCA ANTIGEN
E11        6       ANCA ANTIGENS
E12        4       ANCA ANTINEUTROPHIL CYTOPLASM ANTIBODY

        Enter P or PAGE for more
? s e4-e9 or e12
               5  ANCA ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODIES
               5  ANCA ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODY
               2  ANCA ANTI-NEUTROPHIL CYTOPLASMIC AUTOANTIBODY
               1  ANCA ANTIBODIES
               2  ANCA ANTIBODY
               1  ANCA ANTIBODY ANTI NEUTROPHIL CYTOPLASMIC ANTI
               4  ANCA ANTINEUTROPHIL CYTOPLASM ANTIBODY
      S1      20  E4-E9 OR E12
? s e1
      S2   18310  'ANCA'
? e e1

Ref    Items Type  RT  Index-term
R1      8101        7 *ANCA
R2      3635   X   30  ANTIBODIES, ANTINEUTROPHIL CYTOPLASMIC
R3         1   F    1  ANTINEUTROPHIL CYTOPLASMIC ANTIBODY
R4     13157   B    5  AUTOANTIBODY
R5      3699   U   20  NEUTROPHIL CYTOPLASMIC ANTIBODY
? s r1:r3 or r5
            9450  ANCA:ANTINEUTROPHIL CYTOPLASMIC ANTIBODY
            3699  NEUTROPHIL CYTOPLASMIC ANTIBODY
      S3   11298  R1:R3 OR R5
? e asca
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Ref    Items  Index-term
E1         4  ASC/TMS1
E2         1  ASC:SIL RATIO
E3      6284 *ASCA
E4         3  ASCA (ACARINA)
E5         1  ASCA AND RXTE OBSERVATIONS
E6         1  ASCA ANNANDALEI (ACARINA)
E7         1  ASCA ANTI-OMPC
E8         3  ASCA ANTI-SACCHAROMYCES CEREVISIAE ANTIBODIES
E9         7  ASCA ANTI-SACCHAROMYCES CEREVISIAE ANTIBODY
E10        2  ASCA ANTIBODIES
E11        3  ASCA ANTIBODY
E12        2  ASCA ANWENJUI (ACARINA)

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? s e3 or s7 or e8 or e9 or e10 or e11
>>>"S7" does not exist
             6284  ASCA
                0  S7
                3  ASCA ANTI-SACCHAROMYCES CEREVISIAE ANTIBODIES
                7  ASCA ANTI-SACCHAROMYCES CEREVISIAE ANTIBODY
                2  ASCA ANTIBODIES
                3  ASCA ANTIBODY
      S4     6284  'ASCA' OR S7 OR 'ASCA ANTI-SACCHAROMYCES CEREVISIAE
                   ANTIBODIES' OR 'ASCA ANTI-SACCHAROMYCES CEREVISIAE
                   ANTIBODY' OR 'ASCA ANTIBODIES' OR 'ASCA ANTIBODY'
? p

Ref    Items  Index-term
E13        2  ASCA APHIDIOIDES (ACARINA)
E14        1  ASCA AVIANIDA (ACARINA)
E15        1  ASCA DORSOPOROSA (ACARINA)
E16        1  ASCA GANDAHANA (ACARINA)
E17        1  ASCA GARMANI (ACARINA)
E18        3  ASCA GENE
E19        1  ASCA GROSTALI (ACARINA)
E20        1  ASCA GROSTALI N.SP.
E21        1  ASCA IBASILEONILA (ACARINA)
E22        1  ASCA IDIOBASIS (ACARINA)
E23        1  ASCA IGA
E24        1  ASCA IGA ASCA IMMUNOGLOBULIN A

          Enter P or PAGE for more
? s e23 or e24
                1  ASCA IGA
                1  ASCA IGA ASCA IMMUNOGLOBULIN A
      S5        2  'ASCA IGA' OR 'ASCA IGA ASCA IMMUNOGLOBULIN A'
? p

Ref    Items  Index-term
E25        1  ASCA IGG
E26        1  ASCA IGG ASCA IMMUNOGLOBULIN G
E27        1  ASCA IV
E28        1  ASCA KOSUNGENSIS (ACARINA)
E29        1  ASCA LONGISETA (ACARINA)
E30        1  ASCA MACROMELA (ACARINA)
E31        1  ASCA MACROMELA N.SP.
E32        2  ASCA MEASUREMENTS
E33        1  ASCA MINDANENSIS (ACARINA)
E34        1  ASCA MINDI (ACARINA)
E35        1  ASCA MINDI N.SP.
E36        1  ASCA MUSCICOLA (ACARINA)

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                1  ASCA IGG
                1  ASCA IGG ASCA IMMUNOGLOBULIN G
                1  ASCA IV
      S6        3  'ASCA IGG' OR 'ASCA IGG ASCA IMMUNOGLOBULIN G' OR 'ASCA
                   IV'
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E1       1  PANC-89 CELLS
E2       1  PANC-9 CELL LINE (HOMINIDAE)
E3    1720 *PANCA
E4       3  PANCA ANTIBODIES
E5       3  PANCA ANTIBODY
E6       1  PANCA ANTIGEN
E7       1  PANCA ANTIGENS
E8       1  PANCA ANTINEUTROPHIL CYTOPLASMIC ANTIGEN
E9       1  PANCA AUTOANTIBODY
E10      1  PANCA CORE EPITOPE
E11      1  PANCA GENE
E12      2  PANCA IN IBD

          Enter P or PAGE for more
? s e3or e4 or e5
                0  E3OR E4
                3  PANCA ANTIBODY
      S7        3  E3OR E4 OR 'PANCA ANTIBODY'
? s e12 or e9 or e8
                2  PANCA IN IBD
                1  PANCA AUTOANTIBODY
                1  PANCA ANTINEUTROPHIL CYTOPLASMIC ANTIGEN
      S8        4  'PANCA IN IBD' OR 'PANCA AUTOANTIBODY' OR 'PANCA
                   ANTINEUTROPHIL CYTOPLASMIC ANTIGEN'
? p

Ref   Items  Index-term
E13      1  PANCA MONOCLONAL ANTIBODIES
E14      1  PANCA P-ANTINEUTROPHIL CYTOPLASMIC ANTIBODIES
E15      5  PANCA PERINUCLEAR ANTI-NEUTROPHIL CYTOPLASMIC
E16      4  PANCA PERINUCLEAR ANTINEUTROPHIL CYTOPLASMIC A
E17      1  PANCA PLASMA ANTINEUTROPHIL CYTOPLASMIC ANTIBO
E18      1  PANCA TITER
E19      1  PANCA VASCULITIS
E20      1  PANCA-LIKE
E21      2  PANCA-POSITIVE
E22      1  PANCA-POSITIVE PULMO-RENAL SYNDROME
E23      1  PANCA-REACTIVE FRAGMENT
E24      1  PANCA-RELATED

          Enter P or PAGE for more
? s e13-e18
                1  PANCA MONOCLONAL ANTIBODIES
                1  PANCA P-ANTINEUTROPHIL CYTOPLASMIC ANTIBODIES
                5  PANCA PERINUCLEAR ANTI-NEUTROPHIL CYTOPLASMIC
                4  PANCA PERINUCLEAR ANTINEUTROPHIL CYTOPLASMIC A
                1  PANCA PLASMA ANTINEUTROPHIL CYTOPLASMIC ANTIBO
                1  PANCA TITER
      S9       13  E13-E18
? p

Ref   Items  Index-term
E25      4  PANCAA
E26      1  PANCABHUTA
E27      1  PANCACAKE
E28      4  PANCACEA
E29      1  PANCACES
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E30        3  PANCACKED
E31        1  PANCACKES
E32        1  PANCACYL
E33        6  PANCADAS
E34        1  PANCADENA
E35        4  PANCADER
E36        1  PANCADES

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Set     Items   Description
S1         20   E4-E9 OR E12
S2      18310   'ANCA'
S3      11298   R1:R3 OR R5
S4       6284   'ASCA' OR S7 OR 'ASCA ANTI-SACCHAROMYCES CEREVISIAE ANTIBO-
             DIES' OR 'ASCA ANTI-SACCHAROMYCES CEREVISIAE ANTIBODY' OR 'AS-
             CA ANTIBODIES' OR 'ASCA ANTIBODY'
S5          2   'ASCA IGA' OR 'ASCA IGA ASCA IMMUNOGLOBULIN A'
S6          3   'ASCA IGG' OR 'ASCA IGG ASCA IMMUNOGLOBULIN G' OR 'ASCA IV'
S7          3   E3OR E4 OR 'PANCA ANTIBODY'
S8          4   'PANCA IN IBD' OR 'PANCA AUTOANTIBODY' OR 'PANCA ANTINEUTR-
             OPHIL CYTOPLASMIC ANTIGEN'
S9         13   E13-E18
? s s1 or s2 or s3 or s7 or s8 or s9
            20  S1
         18310  S2
         11298  S3
             3  S7
             4  S8
            13  S9
     S10 21524  S1 OR S2 OR S3 OR S7 OR S8 OR S9
? s s4 or s5 or s6
          6284  S4
             2  S5
             3  S6
     S11  6284  S4 OR S5 OR S6
? s s10 and s11
         21524  S10
          6284  S11
     S12   352  S10 AND S11
? e feces

Ref   Items   RT  Index-term
E1        1       FECERY
E2        1       FECERZUNGE
E3   232330   38 *FECES
E4        1       FECES --ABNORMALITIES --AB
E5    13507       FECES --ANALYSIS --AN
E6        1       FECES --ANATOMY AND HISTOLOGY --AH
E7     7654       FECES --CHEMISTRY --CH
E8      193       FECES --CYTOLOGY --CY
E9       49       FECES --DRUG EFFECTS --DE
E10     709       FECES --ENZYMOLOGY --EN
E11     299       FECES --IMMUNOLOGY --IM
E12     464       FECES --METABOLISM --ME

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? s e3:e12
     S13 232329  'FECES':'FECES --METABOLISM --ME'
? e e3

Ref   Items Type  RT  Index-term
R1   141520       38 *FECES
R2      627   R    4  DEFECATION
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R3      7831    R     3  DIARRHEA
R4      9200    B     7  HUMAN EXCRETA
R5      4230    R     3  INTESTINAL CONTENT
R6     14062    R     5  MANURE
R7      1018    N     2  MECONIUM
R8      1480    R     3  GASTROINTESTINAL CONTENTS
R9       240    R        WASTE SOLIDS,NIGHT SOIL
R10    10409             DC=A12
R11        3    B   276  FLUIDS, EXCRETA AND SECRETIONS
R12        0    S     2  FAECAL EXCRETION

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? p

Ref    Items Type  RT  Index-term
R13     6686    S     2  FAECES
R14        0    S     2  FECAL EXCRETION
R15    15921    S     2  STOOL
R16     6656    S     2  STOOLS
R17    61203    X        DC=A12.459.
R18       43    R     5  DIGESTIVE TRACT CONTENTS
R19     2044    R    10  GASTROINTESTINAL CONTENTS
R20     4478    R     7  MANURE
R21     5193    N     8  MECONIUM
R22     3143    N    15  MELENA
R23      211    N     4  MECONIUM
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            DIES' OR 'ASCA ANTI-SACCHAROMYCES CEREVISIAE ANTIBODY' OR 'AS-
            CA ANTIBODIES' OR 'ASCA ANTIBODY'
S5          2   'ASCA IGA' OR 'ASCA IGA ASCA IMMUNOGLOBULIN A'
S6          3   'ASCA IGG' OR 'ASCA IGG ASCA IMMUNOGLOBULIN G' OR 'ASCA IV'
S7          3   E3OR E4 OR 'PANCA ANTIBODY'
S8          4   'PANCA IN IBD' OR 'PANCA AUTOANTIBODY' OR 'PANCA ANTINEUTR-
            OPHIL CYTOPLASMIC ANTIGEN'
S9         13   E13-E18
S10     21524   S1 OR S2 OR S3 OR S7 OR S8 OR S9
S11      6284   S4 OR S5 OR S6
S12       352   S10 AND S11
S13    232329   'FECES':'FECES --METABOLISM --ME'
S14    203650   R1:R23
? s s12 and (s13 or s14)
           352  S12
        232329  S13
        203650  S14
     S15     14  S12 AND (S13 OR S14)
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Processing
Processed  40 of  42 files ...
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     S16      14  S15/2003:2006
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   652, 654

 15/8/1     (Item 1 from file: 155)
DIALOG(R)File 155:(c) format only 2006 Dialog. All rts. reserv.

20902886   PMID: 16385247
  Combined use of noninvasive tests is useful in the initial diagnostic
approach to a child with suspected inflammatory bowel disease.
Jan 2006
  Tags: Female; Male
  Descriptors: *Antibodies, Antineutrophil Cytoplasmic--analysis--AN;
*Antibodies, Fungal--analysis--AN; *Diagnostic Tests, Routine--standards
--ST; *Inflammatory Bowel Diseases--diagnosis--DI; *Leukocyte L1 Antigen
Complex--analysis--AN; Adolescent; Child; Colitis, Ulcerative--diagnosis
--DI; Colitis, Ulcerative--immunology--IM; Colitis, Ulcerative--pathology
--PA; Comparative Study; Crohn Disease--diagnosis--DI; Crohn Disease
--immunology--IM; Crohn Disease--pathology--PA; Diagnosis, Differential;
Diagnostic Tests, Routine--methods--MT; Feces--chemistry--CH; Humans;
Inflammatory Bowel Diseases--immunology--IM; Inflammatory Bowel Diseases
--pathology--PA; Intestine, Small--pathology--PA; Intestine, Small
--physiology--PH; Intestine, Small--ultrasonography--US; Permeability;
Reproducibility of Results; Saccharomyces cerevisiae--immunology--IM;
Sensitivity and Specificity
  CAS Registry No.: 0 (Antibodies, Antineutrophil Cytoplasmic); 0
 (Antibodies, Fungal); 0 (Leukocyte L1 Antigen Complex)


 15/8/2     (Item 1 from file: 5)
0015865142   BIOSIS NO.: 200600210537
Measurement of fecal lactoferrin, anti-saccharomyces cerevisiae antibody (
  ASCA) and anti-neutrophil cytoplasmic antigen antibody (ANCA)
  in non-IBD patients and healthy control subjects
2005


 15/8/3     (Item 2 from file: 5)
0015738641   BIOSIS NO.: 200600084036
Measurement of anti-neutrophil cytoplasmic antibodies (ANCA) in human
  feces as an indicator of ulcerative colitis
2004


 15/8/4     (Item 3 from file: 5)
0015550582   BIOSIS NO.: 200510245082
The detection of lactoferrin, ASCA, and ANCA in feces is
  useful for assessing pediatric IBD patients
2004


 15/8/5     (Item 1 from file: 34)
DIALOG(R)File  34:(c) 2007 The Thomson Corp. All rts. reserv.

13664156   Genuine Article#: 862GW   Number of References: 0
Title: The detection of lactoferrin, ASCA, and ANCA in
    feces is useful for assessing pediatric IBD patients
Publication date: 20041000
Journal Subject Category: GASTROENTEROLOGY & HEPATOLOGY
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15/8/6 (Item 1 from file: 73)
14183289 EMBASE No: 2006589904
Antibodies to I2 predict clinical response to fecal diversion in Crohn's disease
2006

15/8/7 (Item 2 from file: 73)
13040282 EMBASE No: 2005102251
Non-invasive markers of inflammatory bowel disease (IBD) in children
NIET-INVASIEVE MARKERS BIJ INFLAMMATOIRE DARMZIEKTEN OP DE KINDERLEEFTIJD
2005

15/8/8 (Item 3 from file: 73)
12012499 EMBASE No: 2003123364
Laboratory tests in inflammatory bowel disease
LABORDIAGNOSTIK BEI CHRONISCH ENTZUNDLICHEN DARMERKRANKUNGEN
2003

15/8/9 (Item 1 from file: 340)
10630310 2004-0039979
C/INFLAMMATORY BOWEL DISEASE AND IRRITABLE BOWEL SYNDROME IBD-FIRST CHEK DIAGNOSTIC PANEL; FOR THE MEASUREMENT OF TOTAL ENDOGENOUS LACTOFERRIN, ANTI-SACCHAROMYCES CEREVISIAE ANTIBODIES (ASCA) AND ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODIES (ANCA) IN HUMAN FECES; KITS
? t s15/3/9

15/3/9 (Item 1 from file: 340)
DIALOG(R)File 340:CLAIMS(R)/US Patent

10630310 2004-0039979
C/INFLAMMATORY BOWEL DISEASE AND IRRITABLE BOWEL SYNDROME IBD-FIRST CHEK DIAGNOSTIC PANEL; FOR THE MEASUREMENT OF TOTAL ENDOGENOUS LACTOFERRIN, ANTI-SACCHAROMYCES CEREVISIAE ANTIBODIES (ASCA) AND ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODIES (ANCA) IN HUMAN FECES; KITS
Inventors: Boone James Hunter (US); Lyerly David Maxwell (US); Wilkins Tracy Dale (US)
Assignee: Unassigned Or Assigned To Individual
Assignee Code: 68000
Probable Assignee (A1): TECHLAB Inc
Attorney, Agent or Firm: JEAN M. DICKMAN;SHOOK, HARDY & BACON L.L.P., One Kansas City Place, 1200 Main Street, Kansas City, MO, 64105-2118, US

	Publication Number	Kind	Date	Application Number	Date
	US 20040137536	A1	20040715	US 2003693377	20031024
Priority Applic:				US 2003693377	20031024
Provisional Applic:				US 60-421395	20021025

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            $1.39    0.236 DialUnits File654
     $1.39  Estimated cost File654
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    $80.99  Estimated cost this search
    $81.02  Estimated total session cost   8.643 DialUnits
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Connecting via Winsock to Dialog


Logging in to Dialog

Trying 31060000009998...Open

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PLEASE LOGON:
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ENTER PASSWORD:
 ********
Welcome to DIALOG

Dialog level 05.15.00D

Last logoff:  09jan07 15:03:41
Logon file405 09jan07 15:04:38
* * *
SYSTEM:HOME
Cost is in DialUnits
Menu System II: D2 version 1.8.0 term=ASCII
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 Information:
  1.  Announcements (new files, reloads, etc.)
  2.  Database, Rates, & Command Descriptions
  3.  Help in Choosing Databases for Your Topic
  4.  Customer Services (telephone assistance, training, seminars, etc.)
  5.  Product Descriptions

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  6.  DIALOG(R) Document Delivery
  7.  Data Star(R)

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      /H = Help            /L = Logoff          /NOMENU = Command Mode
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Enter an option number to view information or to connect to an online
 service.  Enter a BEGIN command plus a file number to search a database
(e.g., B1 for ERIC).
? b 410

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     $0.00  Estimated total session cost   0.234 DialUnits

File 410:Dialog Comm.-of-Interest Newsl/Jul (c) 2006 Dialog

      Set  Items  Description
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? set hi ;set hi
HILIGHT set on as ''
HILIGHT set on as ''
? e feces

Ref   Items  Index-term
E1        1  FEB88
E2        1  FEC
E3        1 *FECES
E4      131  FECHA
E5       19  FECHAS
E6       30  FED
E7        2  FEDBIZOPPS
E8      567  FEDERAL
E9       19  FEDERALLY
E10      12  FEDERATION
E11       1  FEDERER
E12       8  FEDERICO

          Enter P or PAGE for more
? s e3
      S1       1  'FECES'
? e fecal

Ref   Items  Index-term
E1        1  FEB88
E2        1  FEC
E3        0 *FECAL
E4        1  FECES
E5      131  FECHA
E6       19  FECHAS
E7       30  FED
E8        2  FEDBIZOPPS
E9      567  FEDERAL
E10      19  FEDERALLY
E11      12  FEDERATION
E12       1  FEDERER

          Enter P or PAGE for more
? logoff
       09jan07 15:05:08 User228206 Session D2666.2
            $0.00    0.463 DialUnits File410
     $0.00  Estimated cost File410
     $0.26  TELNET
     $0.26  Estimated cost this search
     $0.26  Estimated total session cost   0.697 DialUnits
Logoff: level 05.15.00 D  15:05:08
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```
Connecting via Winsock to Dialog


Logging in to Dialog

Trying 31060000009998...Open

DIALOG INFORMATION SERVICES
PLEASE LOGON:
 ********
ENTER PASSWORD:
 ********
Welcome to DIALOG

Dialog level 05.15.00D

Last logoff:  09jan07 15:05:08
Logon file405 09jan07 15:05:26
* * *
SYSTEM:HOME
Cost is in DialUnits
Menu System II: D2 version 1.8.0 term=ASCII
                    *** DIALOG HOMEBASE(SM) Main Menu ***

 Information:
  1.  Announcements (new files, reloads, etc.)
  2.  Database, Rates, & Command Descriptions
  3.  Help in Choosing Databases for Your Topic
  4.  Customer Services (telephone assistance, training, seminars, etc.)
  5.  Product Descriptions

 Connections:
  6.  DIALOG(R) Document Delivery
  7.  Data Star(R)

    (c) 2003 Dialog, a Thomson business.      All rights reserved.

      /H = Help            /L = Logoff          /NOMENU = Command Mode


Enter an option number to view information or to connect to an online
 service.  Enter a BEGIN command plus a file number to search a database
(e.g., B1 for ERIC).
? b 410

       09jan07 15:05:26 User228206 Session D2667.1
            $0.00    0.234 DialUnits FileHomeBase
     $0.00  Estimated cost FileHomeBase
     $0.00  Estimated cost this search
     $0.00  Estimated total session cost   0.234 DialUnits

File 410:Dialog Comm.-of-Interest Newsl/Jul (c) 2006 Dialog

      Set  Items  Description
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? set hi ;set hi
HILIGHT set on as ''
HILIGHT set on as ''
? b 155 medicine patents
>>>         138 is unauthorized
>>>         351 is unauthorized
>>>         352 is unauthorized
>>>3 of the specified files are not available
```

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      09jan07 15:05:34 User228206 Session D2667.2
           $0.00    0.115 DialUnits File410
     $0.00  Estimated cost File410
     $0.03  TELNET
     $0.03  Estimated cost this search
     $0.03  Estimated total session cost   0.350 DialUnits

SYSTEM:OS  - DIALOG OneSearch
  File 155:MEDLINE(R) 1950-2006/Dec 06
         (c) format only 2006 Dialog
*File 155: MEDLINE has temporarily stopped updating with UD=20061206.
Please see HELP NEWS154 for details.
  File   5:Biosis Previews(R) 1969-2007/Dec W5
         (c) 2007 The Thomson Corporation
  File  34:SciSearch(R) Cited Ref Sci 1990-2007/Dec W5
         (c) 2007 The Thomson Corp
  File  35:Dissertation Abs Online 1861-2006/Nov
         (c) 2006 ProQuest Info&Learning
  File  45:EMCare 2007/Dec W5
         (c) 2007 Elsevier B.V.
  File  65:Inside Conferences 1993-2007/Jan 09
         (c) 2007 BLDSC all rts. reserv.
  File  71:ELSEVIER BIOBASE 1994-2007/Jan W1
         (c) 2007 Elsevier B.V.
  File  73:EMBASE 1974-2007/Jan 09
         (c) 2007 Elsevier B.V.
*File  73: Elsevier will not provide an update to Embase on
January 1, 2007.
  File  91:MANTIS(TM) 1880-2006/Jan
         2001 (c) Action Potential
  File  94:JICST-EPlus 1985-2007/Jan W1
         (c)2007 Japan Science and Tech Corp(JST)
*File  94: UD200609W2 is the last update for 2006. UD200701W1 is the
first update for 2007. The file is complete and up to date.
  File  98:General Sci Abs 1984-2006/Dec
         (c) 2006 The HW Wilson Co.
  File 135:NewsRx Weekly Reports 1995-2007/Dec W5
         (c) 2007 NewsRx
  File 144:Pascal 1973-2006/Dec W1
         (c) 2006 INIST/CNRS
  File 149:TGG Health&Wellness DB(SM) 1976-2007/Dec W4
         (c) 2007 The Gale Group
  File 156:ToxFile 1965-2006/Nov W1
         (c) format only 2006 Dialog
*File 156: ToxFile has stopped updating with MEDLINE records. Please
see HELP NEWS 154 for details.
  File 159:Cancerlit 1975-2002/Oct
         (c) format only 2002 Dialog
*File 159: Cancerlit is no longer updating.
Please see HELP NEWS159.
  File 162:Global Health 1983-2007/Dec
         (c) 2007 CAB International
  File 164:Allied & Complementary Medicine 1984-2007/Jan
         (c) 2007 BLHCIS
  File 172:EMBASE Alert 2007/Jan 09
         (c) 2007 Elsevier B.V.
  File 266:FEDRIP 2006/Dec
         Comp & dist by NTIS, Intl Copyright All Rights Res
  File 369:New Scientist 1994-2007/Oct W2
         (c) 2007 Reed Business Information Ltd.
  File 370:Science 1996-1999/Jul W3
         (c) 1999 AAAS
*File 370: This file is closed (no updates). Use File 47 for more current
information.
  File 399:CA SEARCH(R) 1967-2007/UD=14603
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         (c) 2007 American Chemical Society
*File 399: Use is subject to the terms of your user/customer agreement.
IPCR/8 classification codes now searchable as IC=. See HELP NEWSIPCR.
  File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
         (c) 2006 The Thomson Corp
  File 444:New England Journal of Med. 1985-2007/Dec W4
         (c) 2007 Mass. Med. Soc.
  File 467:ExtraMED(tm) 2000/Dec
         (c) 2001 Informania Ltd.
  File 123:CLAIMS(R)/Current Legal Status 1980-2007/Jan 02
         (c) 2007 IFI/CLAIMS
*File 123: Reassignment data is now updated weekly.
  File 324:German Patents Fulltext 1967-200701
         (c) 2007 Univentio
*File 324: For important information about IPCR/8 and forthcoming
changes to the IC= index, see HELP NEWS IPCR.
  File 331:Derwent WPI First View    UD=200702 (c) 2007 The Thomson Corp.
*File 331: For patent family information, search also File 351, 352,
or 350.
  File 340:CLAIMS(R)/US Patent 1950-07/Jan 04
         (c) 2007 IFI/CLAIMS(R)
*File 340: The 2006 reload is online as of December 1, 2006.
IPCR/8 is available.
  File 342:Derwent Patents Citation Indx 1978-07/200682
         (c)2007 The Thomson Corp.
  File 344:Chinese Patents Abs Jan 1985-2006/Jan
         (c) 2006 European Patent Office
  File 345:Inpadoc/Fam.& Legal Stat 1968-2006/UD=200701
         (c) 2007 EPO
  File 347:JAPIO Dec 1976-2006/Sep(Updated 061230)
         (c) 2007 JPO & JAPIO
  File 348:EUROPEAN PATENTS 1978-2006/ 200701
         (c) 2007 European Patent Office
*File 348: For important information about IPCR/8 and forthcoming
changes to the IC= index, see HELP NEWSIPCR.
  File 349:PCT FULLTEXT 1979-2006/UB=20070104UT=20061228
         (c) 2007 WIPO/Thomson
*File 349: For important information about IPCR/8 and forthcoming
changes to the IC= index, see HELP NEWSIPCR.
  File 353:Ei EnCompassPat(TM) 1964-200701
         (c) 2007 Elsevier Eng. Info. Inc.
*File 353: Ei EnCompassPat/Ei EnCompassLit combined usage is
limited to 2 hrs/yr.
  File 371:French Patents 1961-2002/BOPI 200209
         (c) 2002 INPI.  All rts. reserv.
*File 371: This file is not currently updating. The last update is 200209.
  File 447:IMS Patent Focus 2006/Sep
         (c) 2006 IMS Health & Affiliates
  File 652:US Patents Fulltext 1971-1975
         (c) format only 2002 Dialog
  File 654:US Pat.Full. 1976-2007/Jan 04
         (c) Format only 2007 Dialog
*File 654: IPCR/8 classification codes now searchable in 2006 records.
For information about IC= index changes, see HELP NEWSIPCR.
  File 670:LitAlert 1973-2007/UD=200615A
         (c) 2007 The Thomson Corp.

      Set  Items  Description
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? e feces

Ref    Items    RT  Index-term
E1         1        FECERY
E2         1        FECERZUNGE
E3    232330    38 *FECES
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E4         1       FECES --ABNORMALITIES --AB
E5     13507       FECES --ANALYSIS --AN
E6         1       FECES --ANATOMY AND HISTOLOGY --AH
E7      7654       FECES --CHEMISTRY --CH
E8       193       FECES --CYTOLOGY --CY
E9        49       FECES --DRUG EFFECTS --DE
E10      709       FECES --ENZYMOLOGY --EN
E11      299       FECES --IMMUNOLOGY --IM
E12      464       FECES --METABOLISM --ME

          Enter P or PAGE for more
? s e3:e12
      S1  232329  'FECES':'FECES --METABOLISM --ME'
? e e3

Ref    Items Type  RT  Index-term
R1    141520       38 *FECES
R2       627   R    4  DEFECATION
R3      7831   R    3  DIARRHEA
R4      9200   B    7  HUMAN EXCRETA
R5      4230   R    3  INTESTINAL CONTENT
R6     14062   R    5  MANURE
R7      1018   N    2  MECONIUM
R8      1480   R    3  GASTROINTESTINAL CONTENTS
R9       240   R       WASTE SOLIDS,NIGHT SOIL
R10    10409           DC=A12
R11        3   B  276  FLUIDS, EXCRETA AND SECRETIONS
R12        0   S    2  FAECAL EXCRETION

          Enter P or PAGE for more
? p

Ref    Items Type  RT  Index-term
R13     6686   S    2  FAECES
R14        0   S    2  FECAL EXCRETION
R15    15921   S    2  STOOL
R16     6656   S    2  STOOLS
R17    61203   X       DC=A12.459.
R18       43   R    5  DIGESTIVE TRACT CONTENTS
R19     2044   R   10  GASTROINTESTINAL CONTENTS
R20     4478   R    7  MANURE
R21     5193   N    8  MECONIUM
R22     3143   N   15  MELENA
R23      211   N    4  MECONIUM
? s r1:r23
>>>One or more prefixes are unsupported
>>>  or undefined in one or more files.
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? ds

Set     Items   Description
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S2     203650   R1:R23
? s1 or s2
Processing
Processing
<------User Break------>
u!
? ds

Set     Items   Description
S1     232329   'FECES':'FECES --METABOLISM --ME'
S2     203650   R1:R23
? s (s1 or s2) (100n) anca?
          232329  S1
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10987250 PMID: 8924660
[Upper digestive tract hemorrhage in the Peruvian Andes: report of 115 cases observed in Huaraz]
Hemorragia digestiva alta en los Andes Peruanos: reporte de 115 casos observados en Huaraz.
May-Aug 1996

4/6/5 (Item 1 from file: 5)
0015738641 BIOSIS NO.: 200600084036
Measurement of anti-neutrophil cytoplasmic antibodies (ANCA) in human feces as an indicator of ulcerative colitis
2004

4/6/6 (Item 2 from file: 5)
0015550582 BIOSIS NO.: 200510245082
The detection of lactoferrin, ASCA, and ANCA in feces is useful for assessing pediatric IBD patients
2004

4/6/7 (Item 1 from file: 73)
13873516 EMBASE No: 2006301985
Wegener's granulomatosis complicated with aphthoid colitis
2006

4/6/8 (Item 2 from file: 73)
13373713 EMBASE No: 2005429530
Churg-Strauss syndrome in a patient receiving pranlukast as treatment for asthma
2005

4/6/9 (Item 3 from file: 73)
13040282 EMBASE No: 2005102251
Non-invasive markers of inflammatory bowel disease (IBD) in children
NIET-INVASIEVE MARKERS BIJ INFLAMMATOIRE DARMZIEKTEN OP DE KINDERLEEFTIJD
2005

4/6/10 (Item 4 from file: 73)
12057585 EMBASE No: 2003168802
A case of cutaneous polyarteritis nodosa
2002

4/6/11 (Item 5 from file: 73)
07600120 EMBASE No: 1999096595
Clinical and biological characteristics of immunopathological disease-related erythema nodosum in children
1999

4/6/12 (Item 6 from file: 73)
06692088 EMBASE No: 1996357023
Malignant pyoderma: A clinical variant of pyoderma gangrenosum
1996

4/6/13 (Item 7 from file: 73)
05413786 EMBASE No: 1993181885
Ulcerative colitis and antineutrophil cytoplasmic antibodies in Hong Kong Chinese

1993

4/6/14 (Item 8 from file: 73)
00276623 EMBASE No: 1975048934
Schistosomiasis and other human parasitoses of Lake Lindu in Central Sulawesi (Celebes), Indonesia
1974

4/6/15 (Item 1 from file: 149)
01743900 SUPPLIER NUMBER: 20180125 (USE FORMAT 7 OR 9 FOR FULL TEXT)
II. Diagnostic procedures in a prospective multicenter study of 167 patients.(Fever of Unknown Origin (FUO))
1997
WORD COUNT: 9823 LINE COUNT: 00842

4/6/16 (Item 2 from file: 149)
01743899 SUPPLIER NUMBER: 20180124 (USE FORMAT 7 OR 9 FOR FULL TEXT)
I. A prospective multicenter study of 167 patients with FUO, using fixed epidemiological entry criteria.(Fever of Unknown Origin (FUO))
1997
WORD COUNT: 6520 LINE COUNT: 00584

4/6/17 (Item 1 from file: 399)
DIALOG(R)File 399:(c) 2007 American Chemical Society. All rts. reserv.

Immunoassay for distinguishing ulcerative colitis from Crohn's disease by detecting the presence of fecal anti-neutrophil cytoplasmic antibodies (ANCA)

4/6/18 (Item 1 from file: 467)
00011746
BALANTIDIASIS HUMANA EN HUARAZ: REPORTE DE CINCO CASOS
1997

4/6/19 (Item 1 from file: 340)
10630310 2004-0039979
C/INFLAMMATORY BOWEL DISEASE AND IRRITABLE BOWEL SYNDROME IBD-FIRST CHEK DIAGNOSTIC PANEL; FOR THE MEASUREMENT OF TOTAL ENDOGENOUS LACTOFERRIN, ANTI-SACCHAROMYCES CEREVISIAE ANTIBODIES (ASCA) AND ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODIES (ANCA) IN HUMAN FECES; KITS

4/6/20 (Item 1 from file: 349)
01116759 **Image available**
INFLAMMATORY BOWEL DISEASE AND IRRITABLE BOWEL SYNDROME IBD-FIRST CHEK DIAGNOSTIC PANEL
EPREUVE DIAGNOSTIQUE POUR LA MALADIE INTESTINALE INFLAMMATOIRE, EN DETECTION PREMIERE, ET LE COLON IRRITABLE
Publication Language: English
Filing Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 12479
Publication Year: 2004

4/6/21 (Item 2 from file: 349)
01101357 **Image available**

METHOD FOR DISTINGUISHING ULCERATIVE COLITIS FROM CROHN'S DISEASE BY DETECTING THE PRESENCE OF FECAL ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODIES (ANCA)
METHODE DESTINEE A DISTINGUER LA RECTO-COLITE HEMORRAGIQUE DE LA MALADIE DE CROHN PAR DETECTION DE LA PRESENCE D'ANTICORPS CYTOPLASMIQUES ANTI-NEUTROPHILES (ANCA) FECAUX
Publication Language: English
Filing Language: English
Fulltext Availability:
  Detailed Description
  Claims
Fulltext Word Count: 4069
Publication Year: 2004

4/6/22 (Item 3 from file: 349)
00356672
ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODY MATERIAL ASSOCIATED WITH ULCERATIVE COLITIS AND RELATED METHODS AND KITS
ANTICORPS CYTOPLASMIQUE ANTI-NEUTROPHILE ASSOCIE A LA RECTOCOLITE HEMORRAGIQUE, PROCEDES ET KITS CORRESPONDANTS
Publication Language: English
Fulltext Availability:
  Detailed Description
  Claims
Fulltext Word Count: 36742
Publication Year: 1996

4/6/23 (Item 1 from file: 654)
0005722540
Derwent Accession: 2004-389709
Inflammatory bowel disease and irritable bowel syndrome IBD-first chek diagnostic panel

Fulltext Word Count: 9394
Number of Claims: 29
Exemplary or Independent Claim Number(s): 1,24,28
Number of Drawing Sheets: 2
Number of Figures: 2

4/6/24 (Item 2 from file: 654)
0005705685
Derwent Accession: 2004-248459
Method for distinguishing ulcerative colitis from crohn's disease by detecting the presence of fecal anti-neutrophil cytoplasmic antibodies (ANCA)

Fulltext Word Count: 3325
Number of Claims: 25
Exemplary or Independent Claim Number(s): 1,11,15,17
Number of Drawing Sheets: 1
Number of Figures: 1
? t s4/9/1 2 3 4 11 13 15 16

4/9/1 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

13536605 PMID: 11818981
[Ascariasis: comparison of the therapeutic efficacy between paico and albendazole in children from Huaraz]
Ascaridiasis: Comparacion de la eficacia terapeutica entre paico y albendazol en ninos de Huaraz.

Lopez De Guimaraes D; Neyra Llanos R S; Romero Acevedo J H
Departamento de Medicina, Hospital Victor Ramos Guardia, Huaraz, Peru.
Revista de gastroenterologia del Peru - organo oficial de la Sociedad de Gastroenterologia del Peru (Peru) Jul-Sep 2001, 21 (3) p212-9, ISSN 1022-5129--Print Journal Code: 9108294
Publishing Model Print
Document type: Clinical Trial; Journal Article; Randomized Controlled Trial ; English Abstract
Languages: SPANISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed
Subfile: INDEX MEDICUS

A therapeutical clinical trial was designed to study the effectiveness of Paico and Albendazole, for the treatment of ascariasis in a group of 60 children, between 3 and 14 years old, from a rural community in Huaraz. It was carried out between May and August, 2000. The sample was randomly divided into 30 cases for Paico and 30 for Albendazole, the criteria for entering the trial being a positive examination for Ascaris lumbricoides in feces. The treatment consisted in Paico juice: 1 ml/Kg for less than 10 Kg, and 2 ml/Kg in larger children, one dose before breakfast, for three consecutive days. The Albendazole was administered in a single dose of 400 mg in those over five years of age, and 200 mg in younger children. The effectiveness was evaluated qualitatively (the disappearance of the ascaris eggs from the feces) and quantitatively (decrease in the parasitic burden); in the stool examinations carried out in all cases on entering the study and 15 days after the treatment. All the stool samples were processed in the Referential Laboratory of the Regional Health Authority in Ancash .The qualitative effectiveness between Paico and Albendazole for the eradication of ascariasis was similar at 86.7%. The quantitative effectiveness was 59.5% for Paico and 58.3% for Albendazole. However, it was observed that, unlike Albedazole, Paico is 100% effective in the treatment of Hymenolepsis nana. Adverse effects were presented in 23.3% of the cases for both drugs. It is concluded that, although Paico and Albendazole have a similar effectiveness against Ascaris lumbricoides, Paico has the additional benefit of being effective against Hymenolepsis nana.

Tags: Female; Male
Descriptors: *Albendazole--therapeutic use--TU; *Anthelmintics --therapeutic use--TU; *Ascaridiasis--drug therapy--DT; *Chenopodium ambrosioides; *Phytotherapy; *Plant Oils--therapeutic use--TU; Adolescent; Child; Child, Preschool; Comparative Study; English Abstract; Humans; Peru
CAS Registry No.: 0 (Anthelmintics); 0 (Plant Oils); 54965-21-8 (Albendazole)
Record Date Created: 20020130
Record Date Completed: 20020826

4/9/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

11975848 PMID: 9805923
[A case of MPO-ANCA-related vasculitis that recurred as gastrointestinal bleeding and presented difficulty in treatment]
Inaguma D; Kurata K; Ishihara S; Machida H; Yaomura T; Kumon S
Department of Nephrology, Tosei General Hospital, Aichi, Japan.
Nippon Jinzo Gakkai shi (JAPAN) Sep 1998, 40 (7) p560-5, ISSN 0385-2385--Print Journal Code: 7505731
Publishing Model Print
Document type: Case Reports; Journal Article ; English Abstract
Languages: JAPANESE
Main Citation Owner: NLM
Record type: MEDLINE; Completed
Subfile: INDEX MEDICUS

A 54-year-old man, who had been diagnosed as having MPO-ANCA

-related glomerulonephritis in 1993, developed severe anemia and was admitted to our hospital on October, 1997. Endoscopic examination of the upper gastrointestinal tract revealed melena due to duodenal ulcer (Dieulafoy type). The level of ANCA titer was elevated considerably (640 EU), but otherwise there was no evidence of systemic vasculitis activation such as fever, arthralgia, skin eruption, renal insufficiency, and rise in C reactive protein. A renal biopsy showed neither crescentic formation nor necrosis of glomerulus. Subsequently he developed hematochezia and renal dysfunction rapidly progressed thereafter. Angiographical examination of superior mesenteric artery revealed that the bleeding was responsible for the lesion of the small intestine, probably the ileum. In spite of TAE (transarterial embolization) he had recurrence of severe hematochezia three days later. Partial ileotomy was performed and progression of the anemia was stopped. Multiple ulcer was found in the resected ileum. The small arteries in the submucosa at the ulceration showed fibrinoid necrosis of the vessel walls. These findings suggested that ANCA-related vasculitis had relapsed. The patient received methylprednisolone pulse therapy, followed by oral administration of prednisolone after the operation. Both serum levels of creatinine and MPO-ANCA gradually decreased after the initiation of treatment. However, 24 days later, he suddenly manifested severe abdominal pain, and was diagnosed as having perforation of the stomach or duodenum. Due to supportive therapy and reduction of the steroid dose, peritonitis subsided, but symptoms caused by systemic vasculitis developed. Later raised the dose of steroid suppressed the activity of systemic vasculitis. In this case, elevation of the ANCA titer demonstrated recurrence of MPO-ANCA-related vasculitis as gastrointestinal bleeding.

Tags: Male

Descriptors: *Antibodies, Antineutrophil Cytoplasmic--analysis--AN; *Gastrointestinal Hemorrhage--etiology--ET; *Peroxidase--immunology--IM; *Vasculitis--diagnosis--DI; Antibody Specificity; Biological Markers --analysis--AN; English Abstract; Glomerulonephritis--etiology--ET; Humans; Middle Aged; Recurrence; Vasculitis--complications--CO

CAS Registry No.: 0 (Antibodies, Antineutrophil Cytoplasmic); 0 (Biological Markers)

Enzyme No.: EC 1.11.1.7 (Peroxidase)

Record Date Created: 19990210

Record Date Completed: 19990210

4/9/3 (Item 3 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

11531069 PMID: 9365154

Anti-neutrophil cytoplasmic antibodies in inflammatory bowel disease with special attention for IgA-class antibodies.

Gigase P; De Clerck L S; Van Cotthem K A; Bridts C H; Stevens W J; Van Outryve M; Pelckmans P A

University of Antwerp, Belgium.

Digestive diseases and sciences (UNITED STATES) Oct 1997, 42 (10) p2171-4, ISSN 0163-2116--Print Journal Code: 7902782

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: AIM; INDEX MEDICUS

Perinuclear anti-neutrophil cytoplasmic antibodies (P-ANCA) of the IgG class have been reported in inflammatory bowel disease, mainly in ulcerative colitis. Since this disease affects the gastrointestinal tract, we determined whether IgA class ANCA were present in inflammatory bowel disease. We used an indirect immunofluorescence assay for IgG and IgA ANCA testing. Sera from 34 patients with Crohn's disease and 29 patients with ulcerative colitis were collected together with clinical and

laboratory data. We found IgA class ANCA of a perinuclear type in 52% of patients with ulcerative colitis and in 9% of Crohn's disease patients. There was a significant association between the presence of IgA ANCA and the occurrence of blood in the feces in the ulcerative colitis group (P = 0.03). IgG ANCA was found in 56% of patients with ulcerative colitis and in 7% of patients with Crohn's disease. Because of partial overlap between IgG and IgA ANCA positivity, the sensitivity of ANCA testing in ulcerative colitis increased from 56% up to 78% by combining IgG and IgA assays. In conclusion, IgA ANCA occurs with a high prevalence in ulcerative colitis. Moreover there is a possible relationship between IgA ANCA and disease activity in ulcerative colitis.

Tags: Female; Male

Descriptors: *Antibodies, Antineutrophil Cytoplasmic--blood--BL; *Immunoglobulin A--blood--BL; *Inflammatory Bowel Diseases--immunology--IM ; Adult; Aged; C-Reactive Protein--analysis--AN; Comparative Study; Fluorescent Antibody Technique, Indirect; Humans; Middle Aged; Reference Values; Research Support, Non-U.S. Gov't; Sensitivity and Specificity

CAS Registry No.: 0 (Antibodies, Antineutrophil Cytoplasmic); 0 (Immunoglobulin A); 9007-41-4 (C-Reactive Protein)

Record Date Created: 19971128

Record Date Completed: 19971128

4/9/4 (Item 4 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

10987250 PMID: 8924660

[Upper digestive tract hemorrhage in the Peruvian Andes: report of 115 cases observed in Huaraz]

Hemorragia digestiva alta en los Andes Peruanos: reporte de 115 casos observados en Huaraz.

Villanueva Palacios J; Lopez de Guimaraes D; Avila Polo F

Departmento de Medicina, Hospital Victor Ramos Guardia de Huaraz-Minsa.

Revista de gastroenterologia del Peru - organo oficial de la Sociedad de Gastroenterologia del Peru (PERU) May-Aug 1996, 16 (2) p99-104, ISSN 1022-5129--Print Journal Code: 9108294

Publishing Model Print

Document type: Journal Article ; English Abstract

Languages: SPANISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: INDEX MEDICUS

One hundred and fifteen patients with upper gastrointestinal bleeding diagnosed, between august 1992 and july 1995, at the "Victor Ramos Guardia" General Hospital in Huaraz (3,100 m.o.s.l.), Ancash, Peru, are here studied to know about epidemiologics and clinical aspects of this condition at high altitude. In all, the patients on upper endoscopy were done and gastric biopsy when it was required. The incidence of upper gastrointestinal bleeding for the population at risk was 9.6/ 10,000 in habitants by year, and the institutional prevalence was 12.3/1,000 hospital discharges. All the patients were native from the sierra of Ancash, 55.7% males, 37.4% older than 60 years at age; mean age 52.2 years (18 = 86), 50.4% admitted ingestion of gastroerosives, 55.7% presented with hematemesis and melena, 34.4% only melena, 41.7% had hemoglobin less than 8g/dl and 66.3% required or blood transfusion. The most frequent causes of upper gastrointestinal bleeding were gastric ulcer (29.6%), gastric cancer (26.1%), duodenal ulcer (17.4%), erosions (6.1%). No cause was detected in 7%. The endoscopy diagnostic certainty was 93%. 84.3% required medical treatment, 15.7% required surgical treatment and the global mortality was 4.3%. Attention is made on the high frequency of gastric ulcer and gastric carcinoma as the source of upper gastro intestinal bleeding, in the Indian population.

Tags: Female; Male

Descriptors: *Gastrointestinal Hemorrhage--epidemiology--EP; Adult; Aged; Aged, 80 and over; Altitude; English Abstract; Gastrointestinal Hemorrhage --etiology--ET; Humans; Middle Aged; Peru--epidemiology--EP; Topography, Medical
Record Date Created: 19961125
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4/9/11 (Item 5 from file: 73)
DIALOG(R)File 73:EMBASE

07600120 EMBASE No: 1999096595
Clinical and biological characteristics of immunopathological disease-related erythema nodosum in children
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Scandinavian Journal of Rheumatology (SCAND. J. RHEUMATOL.) (Norway)
1999, 28/1 (27-32)
CODEN: SJRHA ISSN: 0300-9742
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 23

We report a series of 22 children with idiopathic, drug unrelated erythema nodosum (EN) admitted to our Department. In 5 of them an history of streptococcal pharyngitis was referred; the remaining patients came to us with a diagnosis of 'EN of unknown origin'. Acute phase reactants, immunoglobulins, stool alpha1 antitrypsin, ANA, anti dsDNA antibodies and ANCA assay, chest roentgenogram, tuberculin test, and ophthalmologic assessment were performed in all patients. Etiologic diagnosis was made in 16 patients: Streptococcal pharyngitis (5 cases), chronic inflammatory bowel disease, IBD (3 cases), Behcet syndrome (2 cases), Yersinia enteritis (2 cases), infectious mononucleosis, atypical mycobacterial infection, immunodeficiency related infection, and SLE-like syndrome due to C4 deficiency (1 case each). We found oral/scrotal aphthae in 3 cases, gastrointestinal symptoms in 5 cases, arthritis in 3 cases. Acute phase reactants were positive in 16 patients without correlation to the underlying disease. Conversely, the increased alpha1 antitrypsin stool excretion and IgA serum concentration seemed to represent helpful indicators of IBD and Behcet syndrome, respectively. Proinflammatory cytokine pattern showed increased IL6 serum concentrations both in infectious and in non infectious disease-related EN, whereas a minor involvement of TNF was found in these patients.

DRUG DESCRIPTORS:
acute phase protein--endogenous compound--ec; immunoglobulin a--endogenous compound--ec; interleukin 6--endogenous compound--ec
MEDICAL DESCRIPTORS:
*erythema nodosum
immunopathology; childhood disease; idiopathic disease; staphylococcus infection; mycobacteriosis; immune deficiency; complement deficiency; gastrointestinal symptom; enteritis; yersiniasis; Behcet disease; infectious mononucleosis; human; male; female; clinical article; adolescent ; child; article; priority journal
SECTION HEADINGS:
007 Pediatrics and Pediatric Surgery
013 Dermatology and Venereology

4/9/13 (Item 7 from file: 73)
DIALOG(R)File 73:EMBASE

05413786 EMBASE No: 1993181885
Ulcerative colitis and antineutrophil cytoplasmic antibodies in Hong Kong Chinese
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American Journal of Gastroenterology (AM. J. GASTROENTEROL.) (United States) 1993, 88/6 (864-869)
CODEN: AJGAA ISSN: 0002-9270
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

Inflammatory bowel diseases are known to be rare among the Chinese. The diagnosis of ulcerative colitis has been difficult in some of the Asian countries where infective colitis is more prevalent. Twenty-three Hong Kong Chinese patients diagnosed to have ulcerative colitis were reviewed. The symptoms were relatively mild and extraintestinal manifestation had been rare. Patients responded well to steroid therapy and sulfasalazine. Three patients in this series were found to have cyst and/or trophozoites of Entamoeba histolytica in stool. In this series, 19 patients were tested for antineutrophil cytoplasmic antibody (ANCA). Fourteen patients (73.5%) were positive, of which six (31.5%) showed a perinuclear staining pattern and eight (42%) demonstrated a cytoplasmic pattern. Five patients (26.5%) were negative for any ANCA, and none was positive for both. Sera of these patients were also tested for anti-alpha granules, anti-myeloperoxidase, and anti- lactoferrin activities. None was positive. Control sera collected from 16 patients with irritable bowel syndrome were all negative for the tests. In conclusion, testing of ANCAs may help in making the diagnosis of idiopathic inflammatory bowel disease in difficult situations.

DRUG DESCRIPTORS:
lactoferrin; myeloperoxidase; salazosulfapyridine
MEDICAL DESCRIPTORS:
*irritable colon--diagnosis--di; *ulcerative colitis--diagnosis--di; *ulcerative colitis--therapy--th
adult; aged; article; chinese; clinical article; clinical feature; colon biopsy; crohn disease; entamoeba histolytica; enzyme linked immunosorbent assay; female; follow up; hong kong; human; immunofluorescence; male; patient compliance; priority journal; steroid therapy
CAS REGISTRY NO.: 55599-62-7 (lactoferrin); 599-79-1 (salazosulfapyridine)
SECTION HEADINGS:
005 General Pathology and Pathological Anatomy
048 Gastroenterology

4/9/15 (Item 1 from file: 149)

01743900 SUPPLIER NUMBER: 20180125 (THIS IS THE FULL TEXT)
II. Diagnostic procedures in a prospective multicenter study of 167 patients.(Fever of Unknown Origin (FUO))
Kleijn, Elizabeth M.H.A. de; Lier, Henk J.J. van; Meer, Jos W.M. van der
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TEXT:
Introduction
The diagnostic workup of patients with fever of unknown origin (FUO)

remains a challenge despite the variety of diagnostic methods currently available and many studies on the subject (1, 2, 7, 9, 14, 17, 18, 21, 25, 28, 30, 32, 40, 41, 46, 5 1). FUO has been defined by Petersdorf and Beeson (40) as a febrile illness of more than 3 weeks' duration, fever of 38.3 (degrees) C (101 (degrees) F) or higher on at least 3 occasions, and uncertain diagnosis after 1 week of inhospital diagnostic workup. Recently, this definition has been modernized by excluding immunocompromised patients like patients with neutropenia or acquired immunodeficiency syndrome (AIDS) (12).

Because a large number of diseases have been reported to cause FUO, it is difficult to construct algorithms covering the complete spectrum of FUO. Some attempts have been made in the past to outline diagnostic approaches (13, 16, 19, 26, 31, 38, 50); although they are of value, it is impossible to extrapolate these algorithms to the individual patient with FUO. Many relevant questions remain when studying these algorithms. Should one perform all examinations mentioned in the staged protocol in patients without potentially diagnostic clues? What is the diagnostic yield of all these investigations under various circumstances? Which patients are at risk for a life-threatening disease? Is it possible to distinguish patients with benign fevers?

Based on data retrieved in a retrospective analysis of investigations performed in patients with FUO and a questionnaire on diagnostic techniques used in patients with FUO among Dutch internists, we developed a staged diagnostic protocol (9, 10). This protocol was used in a prospective study on FUO performed during a 2-year period in all university hospitals in the Netherlands, reported elsewhere in this journal (11). In this study, all investigations, the indications for these investigations, and the results were registered prospectively to recover their utility under various conditions.

Methods

In all 8 university hospitals in the Netherlands, all immunocompetent patients fulfilling criteria for FUO according to Petersdorf and Beeson (40) were enrolled in this study. By reviewing records of all patients with fever and by checking the records of all patients in whom blood cultures were ordered on internal medicine wards, we tried to prevent unintended selection bias.

After informed consent, patients were included in our FUO protocol, which consisted of a standardized coded history and a standardized thorough physical examination. A number of additional investigations (Table 1) had to be performed in the first week of examination if an explanatory diagnosis was not established. Much weight was given to the presence or absence of potentially diagnostic clues (PDCs), defined as all localizing signs, symptoms, and abnormalities potentially pointing toward a diagnosis, and the use of these PDCs in the diagnostic process. PDCs derived from history, physical examination, and additional investigations had to be registered in the protocol form. Based on these PDCs a differential diagnosis had to be made by the attending physician and registered in the protocol form. Based on this differential diagnosis, appropriate investigations were ordered to exclude or confirm these diagnoses in patients with PDCs. The indication to perform such investigations, and the entity thus searched for, had to be registered also. In the absence of PDCs and in patients with only misleading PDCs, patients underwent a staged standardized diagnostic protocol (see Table 1). Some tests were done as screening procedures in the absence of specific PDCs, before referral to the university hospital, or as a violation of the protocol by the attending physician. These were coded and studied also. Misleading PDCs are PDCs eventually not leading to the diagnosis. Helpful PDCs are PDCs eventually leading to the diagnosis.

TABLE 1. Diagnostic protocol

Obligatory investigations performed in all patients Sedimentation rate; hemoglobin; mean cellular volume; platelet count; leukocyte count and differential count; serum urea nitrogen; creatinine; sodium; potassium; protein; protein fractions; alkaline phosphatase; aminotransferase; lactate dehydrogenase; creatine phosphokinase; antinuclear antibodies; rheumatoid factors; urinary analysis; feces for occult blood; blood cultures

aerobic and anaerobic (n = 3); tuberculin test; urine, feces, and sputum culture when indicated; chest X-ray; ultrasonography of upper abdomen Phase 1 diagnostic protocol in patients without PDCs (n = 5) or with misleading PDCs only (n = 38) Pulse/rectal temperature measurement by observer, fundoscopy by an ophthalmologist; calcium, phosphate, urate, amylase, and TSH/T4; immunoelectrophoresis of serum and urine; CRP; ACE; ANCA, anti-dsDNA; ASO; cryoglobulin; C3, C4, CH50; serology for Cytomegalovirus, Epstein-Barr virus, Mycoplasma, Brucella, Toxoplasma, Borrelia, Coxiella, Treponema, Yersinia; blood cultures incubating > 1 week; blood cultures, gastric fluid, urine cultures for tuberculosis; stools for worms, eggs, cysts; bone marrow puncture and culture for Mycobacteria, Brucella, Yersinia; In-111-IgG scintigraphy; X-Ray of sinus and teeth; ultrasonography of pelvis Phase 2 diagnostic protocol in patients without PDCs (Performed when Phase 1 did not reveal PDCs or diagnosis) Hepatitis B serology; anergy tests; repeated chest X-ray; IgD in serum; liver biopsy and culture for Mycobacteria and other bacteria and fungi; crista biopsy and culture for Mycobacteria, Brucella, and common bacteria; echocardiography; CT of abdomen and chest; X-Ray colon; temporal artery biopsy in patients over 55 years

Abbreviations: TSH = thyroid-stimulating hormone; T4 = thyroxine; CRP = C-reactive peptide; ACE = angiotensin-converting enzyme; ANCA = antineutrophil cytoplasmic autoantibodies; ds-DNA = double-stranded deoxyribonucleic acid; ASO = antistreptolysin O test; C = complement; CH50 = total hemolytic complement; In-111-IgG = indium-111-labeled polyclonal human immunoglobulin G; CT = computed tomography; PDCs = potentially diagnostic clues.

Patients did not have to remain admitted, after inclusion, all investigations of the protocol could be performed on an outpatient basis. The clinical condition of the patient was the major reason for a longer stay in the hospital.

The standardized diagnostic protocol ended 1) when a definite diagnosis was made, 2) when PDCs appeared during the diagnostic process, 3) when empiric treatment was started, or 4) when fever subsided. The final diagnosis was established by the attending physician and the first author. Diagnoses were established by serology, culture and histology preferably, but sometimes by exclusion of other diseases or response to therapy and disease course.

Follow-up was performed by analysis of the records of the patients and by telephone calls with attending physicians and individual patients; the last follow-up was performed in March 1996 for all patients with uncertain or no diagnosis.

In this study, periodic fever was defined as at least 2 episodes of fever, with intervals of at least 48 hours without fever.

Results of investigations were coded as normal or abnormal. Abnormal tests were subdivided as true positive (directly contributing to the diagnosis), false positive (misleading), or equivocal (abnormal but not providing any convincing evidence or not leading to the cause of FUO). Normal tests were coded as true negative or false negative. Because a gold standard for diagnostic accuracy was not available for many investigations, specificity and sensitivity could only be calculated assuming that negative results were true negative when further investigation or the final diagnosis did not contradict these results. The indications for the investigations were registered and coded also.

Most investigations were performed in each university hospital by the locally standard applied method, because the scale of this study did not allow us to centralize these measurements and investigations. However, all immunoblots for Yersinia enterocolitica were performed by the Department of Medical Microbiology, University Hospital Nijmegen (22, 24, 48). Interpretation of the immunoblot was as follows:

IgA negative and IgG positive for at least 2 bands: infection in the past that was considered equivocal.

IgA positive for at least 1 band and IgG positive for at least 2 bands: recent or persistent infection; this was considered a positive test.

IgA positive for 1 band and IgG positive for 1 band or IgA and IgG weakly positive for 1 or more bands: infection in past or beginning

infection, repeat necessary; when unchanged this result was considered equivocal.

All other microbiologic serology was considered positive only when a fourfold elevation of IgG titer was present. When IgM was present but no fourfold elevation could be demonstrated, the test was considered equivocal.

Statistical analysis: Comparisons between groups were performed with the Fisher exact test (for the 2 x 2 tables) and the Mann-Whitney U test. P values of .05 or less were considered significant, NS is an abbreviation for nonsignificant. Logistic regression as applied to select variables that might predict whether a diagnosis would be made or not. Variables admitted in this analysis were most obligatory investigations (sedimentation rate, hemoglobin, mean cellular volume, platelet count, leukocyte and differential count, serum urea nitrogen, creatinine, sodium, potassium, protein, protein fractions, alkaline phosphatase, aminotransferase, lactate dehydrogenase, urinary analysis, antinuclear antibodies, blood cultures, Chest X-ray, and abdominal ultrasound), fever pattern, referral pattern, specific nonspecific history and physical examination, age, sex, and the presence of night sweats. For the 8 university hospitals, 7 dummy variables were introduced. Logistic regression could be applied only to those patients who had "known" values for all admitted variables. In patients with known values for the selected variables, but with missing values for 1 or more of the other admitted variables, it was verified whether the regression equation was valid. We calculated sensitivity and specificity with 95% confidence intervals.

Results

Of 167 patients meeting the criteria for FUO during the 2-year study period, a diagnosis could be made in only 117. In 43 (26%) patients, infections were found; in 21 (13%), neoplasms; in 40 (24%) patients, noninfectious inflammatory diseases (NIID) (11). A total of 10,855 investigations in 167 patients was performed.

Utility of the screening diagnostic protocol

All data on history and physical examination were entered in a database. The most common PDCs (present in more than 10 patients) were the following (number of patients in parentheses): relevant diseases in past (131), relevant operation in past (68), headache (62), myalgia (58), diarrhea (50), vertigo (48), arthralgia (48), changed bowel habits (42), nausea (42), heart murmur (41), pulmonary abnormalities (38), back pain (38), sore throat (37), abdominal complaints (37), dysuria (30), sensory dysfunction (28), arthritis (27), hepatomegaly (26), palpable breast abnormalities (22), contact with tuberculosis (21), visual complaints (21), tropical trip in recent past (21), goiter (20), splenomegaly (17), cold intolerance (17), neurologic abnormalities (17), insect bite (15), jaundice in past (15), dental intervention (15), hearing loss (15), heat intolerance (15), cervical lymphadenopathy (13), buccal aphthae (13), genital infection in past (12), generalized lymphadenopathy (11), and abnormal vaginal discharge (10). Other PDCs were found by various laboratory and imaging investigations in the first week of admission.

After 1 week of admission, PDCs were present in 162 (97%) patients (Table 2, Figure 1). A diagnosis was made in 114 of 162 (70%) patients with PDCs and in 3 of 5 (60%) patients without PDCs (Fisher exact test, NS). In 16 patients without PDCs or with only misleading PDCs, a diagnosis was made (Table 3). Not every patient without PDCs or with only misleading PDCs underwent the complete first phase of the diagnostic protocol. Some investigations were not performed because new PDCs appeared or fever subsided. Forty-three patients completed the first phase; 15 of them also completed the second part. Exact data on the number of investigations performed as a screening procedure in the absence of PDCs can be found in Tables 4 and 5.

TABLE 2. Potentially diagnostic clues(*) (PDCs) in 167 patients with fever of unknown origin

	Patients Without Diagnosis (n = 50)

	Patients With Diagnosis (n = 117)	Spontaneous Recovery (n = 37)	Persistent Fever (n = 13)	Total
Helpful PDCs only	53			53
Misleading and helpful PDCs	48			48
Misleading PDCs only	13	35	13	61
No PDCs	3	2	0	5

(*) Defined in Methods section.

Utility of investigations in the diagnostic process

Chemical investigations: The obligatory chemical tests (see Table 1) were done in more than 95% of all patients except for serum protein fractions (145 patients), fecal occult blood (109 patients), and creatine phosphokinase (135 patients). None of the chemical investigations revealed the diagnosis, although some contributed somewhat to the diagnosis: in 1 patient with hyponatremia, meningitis proved to be the cause of FUO. In 4 patients with elevated urea, further investigations revealed mixed cryoglobulinemia (n = 2), systemic lupus erythematosus (n = 1), and pyelonephritis with ureteral obstruction (n = 1) as cause of the fever. In 6 patients with abnormal liver chemistry, abnormalities in the liver explaining the FUO were found (localization of malignant lymphoma and Hodgkin lymphoma, cytomegalovirus (n = 2), hepatitis C, and liver metastasis of adenocarcinoma). However, in 50% of our patients with FUO, nonspecific disturbances of liver chemistry were found. Fecal occult blood never was helpful in our patient group and was false positive in 10% of cases. In 1 patient, hypercalcemia led to the diagnosis of bone metastasis of breast cancer. Urate was elevated in 1 patient in whom gout presented as FUO. Creatine phosphokinase was elevated in 2 patients (with relapse polymyositis and dermatomyositis with interstitial lung fibrosis, respectively) and false positive in 1 patient, in whom a dental infection was the cause of FUO. Anemia, present in 127 patients, was normocytic in most patients. In 37 patients mean cellular volume (MCV) was abnormal; none of the 17 patients with microcytic anemia had gastrointestinal abnormalities responsible for the fever.

Immunologic serology (see Table 4): Antinuclear antibodies were helpful in establishing the diagnosis of systemic lupus erythematosus (n = 2), relapse of mixed cryoglobulinemia, and relapse of polymyositis. The presence of rheumatoid factors was helpful in establishing diagnoses for relapse of polymyositis, relapse of mixed cryoglobulinemia, and vasculitis in rheumatoid arthritis. Immuno-electrophoresis of the serum was helpful in establishing diagnoses for relapse of mixed cryoglobulinemia, Schnitzler disease, and gamma-heavy chain disease. In 1 patient with abnormalities on the chest X-ray, angiotensin converting enzyme (ACE) was helpful in finding sarcoidosis. In 1 patient with histologically proven sarcoidosis, ACE was false negative. Antineutrophil cytoplasmatic antibody (ANCA) helped establish the diagnoses for polyarteritis nodosa (n = 1) and Wegener disease (n = 2). ANCA was false positive in patients with the following final diagnoses: relapse of cryoglobulinemia, ulcerative colitis, lung empyema with Actinomyces spp., hypersensitivity vasculitis, chronic pyelonephritis in ureter obstruction, sarcoidosis, and in 2 patients without diagnoses who recovered spontaneously without signs of vasculitis.

(TABULAR DATA NOT REPRODUCIBLE IN ASCII)

Endocrine investigations: In 1 patient who had diarrhea and weight loss, thyroid stimulating hormone (TSH) and thyroxine (T4) measurements proved the diagnosis of hyperthyroidism. In 4 patients, TSH was downregulated but hyperthyroidism was excluded by further testing. Diagnoses in these 4 patients were recurrent urinary tract infections, chronic pseudomonas infection of the lungs, hypersensitivity vasculitis, and no diagnosis, respectively. Plasma cortisol (n = 16), carcino-embryogenic antigen (n = 11), and (Alpha)-fetoprotein (n = 16) did not help in finding diagnoses.

Microbiologic serology (see Table 4): In all patients with cytomegalovirus infection, atypical lymphocytosis was present. The following serology did not help in establishing diagnoses in this study:

Epstein-Barry virus (n = 92), Mycoplasma pneumoniae (n = 99), Brucella spp. (n = 73), Toxoplasma gondii (n = 85), Borrelia burgdorferi (n = 72), Coxiella burnetii (n = 78), Chlamydia psittaci (n = 62), human immunodeficiency virus (HIV) (n = 38), influenza virus (n = 44), Leptospira spp. (n = 12), respiratory syncytial virus (n = 36), and rubella virus (n = 11). In 1 of 56 patients, serology for parainfluenza virus was positive. This patient also had right-sided heart failure and no other cause for the fever could be found; she recovered without specific therapy within 5 weeks. In 1 of 19 patients, a positive Widal test for Salmonella typhi was helpful in establishing the diagnosis, although cultures (blood, stools, urine) remained negative after empirically started antibiotics before admission to the hospital. Because of the clinical picture and course we concluded that she did have typhoid fever.

In 117 patients, serology for Yersinia enterocolitica was performed using the immunoblotting technique as described in the Methods section. Serology was negative in 57 patients, equivocal in 44 patients, and positive in 15 patients. The test was considered true positive in 3 of the 15 patients with positive serology: after 6 weeks of treatment with ciprofloxacin, their fever resolved, serology became negative, and no other cause for the fever could be found. After a follow-up of more than 3 years, these 3 patients remained afebrile. In 12 patients the test was considered false positive; treatment of more than 6 weeks with doxycycline and ciprofloxacin had no effect on the fever, and, in most of the 12, other causes for fever were found: malignant lymphoma (n = 2), light adnexitis, urinary tract infection, relapse of rheumatoid arthritis, mixed cryoglobulinemia, nonclassifiable granulomatous myositis, factitious fever, sarcoidosis, and no diagnosis (n = 3). Overall sensitivity and specificity were 100% and 89%, respectively (confidence intervals: 0.29-1.0 and 0.82-0.94, respectively).

Culture techniques (see Table 4): Aerobic and anaerobic blood cultures, obligatory investigations in our diagnostic protocol, were performed in all patients. In 8 (5%) patients these cultures contributed more or less to establishing the diagnosis: endocarditis in 2 patients, abscesses in 3 patients, an infected central venous device, Pseudomonas spp. bacteremia in pneumonia, and diverticulitis. In 19 patients false positive blood cultures were found growing coagulase-negative staphylococci (n = 10), Streptococcus viridans (n = 3), Mycobacterium kansasii, Corynebacterium spp., Propionibacterium spp., an anaerobic Gram-negative rod, an aerobic sporulating rod, and Enterobacter cloacae combined with Bacillus spp. (1 patient each). Blood cultures from a patient with ischemic colitis as a later complication and stomach cancer as cause of FUO grew Bacteroides fragilis; we consider these results equivocal.

Urinary cultures (n = 134) were helpful in establishing the diagnosis in 5 patients. None of the 69 patients with a normal urinary sediment turned out to have a urinary infection. In 5 patients the test was considered false positive. After treating the assumed urinary tract infection adequately, bacteriuria disappeared, whereas the fever remained unchanged. In 24 patients bacteriuria was found with less than (10.sup.5) microorganisms/mL; there were no signs of a urinary tract infection in any of them.

Fecal cultures for Salmonella spp., Campylobacter jejuni, Shigella spp., and Yersinia enterocolitica were performed in 92 patients; none of the cultures was positive. In 1 patient the clinical course combined with a positive Widal test suggested salmonellosis as cause of the FUO; cultures probably remained negative because of empirically started antibiotics before admission.

None of the cultures of blood, urine, and gastric fluid for Mycobacterium tuberculosis was positive, and none of the cultures for other microorganisms performed without PDCs in accordance with the diagnostic protocol contributed to the diagnosis.

Other cultures contributing to the diagnosis always were performed because PDCs were present for infection (that is, culture of liver biopsy in a patient with cryptococcal infection, cerebrospinal fluid in a patient with Spitz-Holter drain and hyponatremia, lymph node in a patient with tuberculous lymphoma, pleural fluid in a patient with actinomycosis,

central line tip in a patient with infected central venous device, and pericardium biopsy in a patient with tuberculous pericarditis).

Imaging techniques (see Table 5): A chest X-ray helped to establish the following diagnoses in 6 patients without PDCs for chest diseases: Hodgkin disease, malignant lymphoma, recurrent pneumonia combined with urinary tract infection, disseminated cryptococcosis, systemic lupus erythematosus, and sarcoidosis. One patient with pleural empyema had a normal chest X-ray, but scintigraphic and computed tomography (CT) techniques revealed the diagnosis. Assuming all other chest X-rays to be true negative, we calculated overall sensitivity and specificity (see Table 5).

(TABULAR DATA NOT REPRODUCIBLE IN ASCII)

Upper abdominal ultrasonography was performed in only 158 of 167 patients because an abdominal CT had already been performed in 9 patients before inclusion or referral to the university hospital. Upper abdominal ultrasonography contributed to the following diagnoses: malignant lymphoma, liver abscess and pelvic abscess (2 patients each), angioimmunoblastic lymphoma, gamma-heavy chain disease, sarcoidosis, right-sided heart failure, systemic lupus erythematosus in a patient with enlarged Kidneys and abnormal ultrasound reflections, liver metastasis (seen on second ultrasonography), chronic pyelonephritis in ureter obstruction, and tuberculous pericarditis. Abnormal findings were seen on ultrasonography in 68 patients, but in 12 (8%) patients the findings led to unnecessary investigations and thus were considered false positive. In 3 patients ultrasonography was considered false negative because abdominal CT revealed the diagnosis.

Abdominal CT was helpful in making the diagnosis in 2 patients without PDCs (that is, pericarditis due to vasculitis in rheumatoid arthritis and malignant lymphoma, respectively). In 14 patients abdominal CT was considered false positive because it led to unnecessary investigations like laparoscopy, puncture of suspected lesions, or laparotomy. Abdominal causes for the fever were not found in any of the patients with a normal abdominal CT. Considering these CT to be true negative, we calculated overall sensitivity and specificity (see Table 5).

In 3 patients without PDCs, a chest CT enabled us to diagnose tuberculous pericarditis, malignant lymphoma, and dermatomyositis with interstitial lung fibrosis, respectively. In 1 patient, the chest CT was normal, but shortly thereafter an enlarged axillary lymph node became palpable, which turned out to be a lymph node metastasis of a previously treated larynx carcinoma.

Transthoracic echocardiography was useful in finding the following diagnoses in 6 patients with PDCs for cardiac disease: endocarditis (n = 2), pericardium infiltration in acute leukemia, mitral and tricuspid valve disease in heart failure, pericarditis due to vasculitis in rheumatoid arthritis, and tuberculous pericarditis. In 1 patient with endocarditis proven at autopsy, echocardiography was negative several times.

X-ray of the colon helped to find the following diagnoses in 3 patients with PDCs: colonic polyp in Streptococcus bovis endocarditis, diverticulitis, and diverticulitis causing multiple hepatic abscesses.

X-ray series of the small bowel (n = 24) did not contribute to the diagnosis in this study. Abnormal pictures (nodular ileitis not consistent with Crohn disease) were found in 1 patient with positive Yersinia enterocolitica serology. Prolonged courses of antibiotics did not cure this patient, and he still suffers from periodic fever.

Imaging techniques that were helpful in finding the diagnosis (only in patients with PDCs) were the following: 2 of 19 brain CTs, showing infarction in 2 patients with endocarditis; CT of thoracic spine showing lesions of Hodgkin disease; intravenous pyelography showing obstruction of the left ureter in pelvic abscess; 1 of 10 mammograms showing a lesion that proved to be cancer; 2 of 13 Doppler ultrasound studies showing venous thrombosis and a lesion that turned out to be T-cell lymphoma.

Scintigraphic techniques (see Table 5): Results of the indium-111-labeled polyclonal immunoglobulin G ((In.sup.111)IgG) scintigraphy are described extensively elsewhere (8) (see Table 5). Other scintigraphic methods like (In.sup.111)-leukocyte scintigraphy (performed

in 16 patients) and Technetium-99m-leukocyte scintigraphy (8 patients) were all performed in patients without PDCs for local inflamation or infection and did not help establish a diagnosis. In 6 patients, positive scans were found but after extensive further investigations, no local inflammation could be confirmed. An infection was found only in 2 of 17 patients with negative scans.

Gallium-67 scintigraphy was performed in 27 patients (see Table 5). A localized inflammation was not found in any of the 15 patients with negative scans. Considering these scans to be true negative, we calculated overall sensitivity and specificity.

A bone scintigraphy helped to find the following diagnoses in 4 patients with PDCs for local inflammation: Hodgkin disease (n = 2), Still disease (showing arthritis), and bone metastasis of breast cancer. In 1 patient with endocarditis and osteomyelitis caused by Staphylococcus aureus, bone scintigraphy was false negative.

Histologic investigations (see Table 5): Bone marrow aspiration helped to establish the diagnosis in 1 patient with acute monocytic leukemia. This patient had an extreme left shift in the peripheral blood, and 2 previous bone marrow aspirations were not conclusive. In 2 patients, bone marrow cytology was false positive. In the first patient, myelodysplastic syndrome was suspected in the first aspiration, but after spontaneous recovery, this could not be confirmed. He has been afebrile for more than 3 years now, and a diagnosis has never been established. In the other patient, myelodysplastic syndrome was suspected but at autopsy, culture-negative endocarditis was found. In 6 patients bone marrow aspiration did not yield specific abnormalities, whereas bone marrow biopsy was helpful in establishing the diagnosis; considering these tests as false negative, and the remaining tests as true negative, we calculated overall sensitivity and specificity (see Table 5).

Liver biopsy was helpful in finding the diagnosis in 3 (9%) patients. In 1 patient without PDCs for liver disease, liver biopsy helped establish the diagnosis of granulomatous hepatitis. No underlying disease was found, and after therapy with corticosteroids, his condition improved in several months, without recurrence for 4 years now. In 1 patient with disturbed liver chemistry only, liver biopsy was helpful in finding the diagnosis of disseminated cryptococcal infection. In a third patient with abnormal liver chemistry, ultrasonography of the upper abdomen was normal in the first week of admission. A second ultrasonography showed a large lesion in the liver, a biopsy of which revealed adenocarcinoma. In 22 patients, liver biopsy showed nonspecific abnormalities only. In 1 patient a blind liver biopsy was false negative, showing nonspecific abnormalities only, whereas histology of biopsies at laparoscopy showed granulomatous hepatitis.

Bone marrow biopsy aided in the diagnosis in 9 (18%) patients. In 4 patients without PDCs for blood disorders or lymphadenopathy, the diagnoses malignant lymphoma and Hodgkin disease (2 patients each) were found with the help of bone marrow biopsy. In 3 patients with peripheral blood smear abnormalities (leukopenia in 2, extreme left shift in 1), biopsy established the following diagnoses: Hodgkin disease, acute myelofibrosis, and acute monocytic leukemia. Bone marrow biopsy in 1 patient with hot spots on a bone scintigraphy established the diagnosis of metastasis of an adenocarcinoma of the breast. The fifth patient had generalized lymphadenopathy, and bone marrow biopsy pointed to the diagnosis of angioimmunoblastic lymphoma, which was confirmed by a third lymph node biopsy. In 3 patients the results were false positive. In 1 patient, bone marrow biopsy suggested myelodysplastic syndrome, but a repeated biopsy could not confirm this. Eventually, temporal arteritis proved to be the cause of the fever. In 1 patient the bone biopsy showed features of malignant lymphoma, but the patient recovered spontaneously and a second bone biopsy was completely normal. She has been afebrile for 3 years now. In a third patient, Hodgkin disease was suspected from bone marrow biopsy, but after revision the diagnosis was sarcoidosis. Since in 3 of 37 patients with normal bone marrow biopsies, disorders that could have involved the bone marrow (angioimmunoblastic lymphoma, Hodgkin disease, and gamma-heavy chain disease) were found eventually by other means, the possibility exists that the results were false negative. It therefore seems hazardous to give

figures for sensitivity and specificity.

Bronchoalveolar lavage (BAL) was performed in 21 patients for cytologic and microbiologic investigations, 19 of whom had abnormal chest radiographs. In 1 patient only, BAL established the diagnosis. This patient had culture-negative pleural empyema; histologic examination of the BAL fluid showed Actinomyces colonies. After a 6-week treatment with penicillin, fever and symptoms subsided.

In 25 patients a skin biopsy was performed, including 2 patients without skin lesions. In 3 patients with skin lesions, the procedure helped to find the following diagnoses: urticarial vasculitis, hypersensitivity vasculitis, and erythema nodosum in the context of tuberculous axillary lymphoma. In 15 patients, nonspecific abnormalities were found. In 1 patient, skin biopsy suggested septic embolism. Treatment with penicillin had no effect. Because of complaints of arthritis and urethritis with conjunctivitis and moderate response to salicylate, the presumed diagnosis was Reiter disease. The patient's complaints disappeared completely after 8 months, and 3 years later no other cause for the fever has been found.

Biopsy of skin and, muscle was performed in 17 patients with PDCs (skin diseases or abnormal electromyography) (see Table 5). In 1 patient with abnormal electromyography, histologic examination of the biopsy material revealed lymphocytic arteritis; the patient recovered spontaneously after 1 month without a diagnosis being made. He has been free of disease for more than 4.5 years now.

In 24 patients, erlarged lymph nodes were removed for histologic and microbiologic investigations; this procedure helped to establish the diagnosis in 12 (50%) of them. No pathologic lymph nodes were present at physical examination upon admission in 5 of these 12 patients, but in 11 of these 12 patients, generalized lymphadenopathy was demonstrated after extensive ultrasonographic and radiographic investigations. Lymph node biopsies were not helpful in establishing the diagnosis if lymphadenopathy was confined to the cervical or inguinal region (n = 8). In the case of generalized lymphadenopathy, biopsy was helpful in 11 of 14 patients (Fisher exact test, p = .001).

In 3 of 4 patients with urine abnormalities, renal biopsy was helpful (Wegener disease, systemic lupus erythematosus, mixed cryoglobulinemia with glomerulonephritis).

A lumbar puncture was performed in 11 patients; in 2 as a screening procedure without any PDCs, implying a violation of the diagnostic protocol. In 2 (18%) patients this technique was helpful in finding the diagnosis; both patients had severe headache but no signs of meningitis. hi these patients a sterile mononuclear infiltrate of the cerebrospinal fluid was found, and in 1 patient biopsy of the meninges was negative. The presumable diagnosis of Mollaret meningitis was established in both by exclusion of other diseases.

In 5 patients, splenectomy was part of the diagnostic workup before referral because splenomegaly was found; it led to the diagnosis in 2 patients. In the first patient, there was a discrepancy between the histology of the bone marrow biopsy and that of the spleen; the diagnosis remained uncertain until generalized lymphadenopathy developed and lymph node histology was done which showed angioimmunoblastic lymphadenopathy with dysproteinemia (AILD). In the second patient, bone marrow biopsy was suspect for Hodgkin disease but proof could be found only by spleen histology.

Other successful histologic investigations performed because PDCs were present were articular puncture (n = 3) proving pseudogout in 1 patient, gastrocopy (n = 11) with gastric biopsy proving 1 case of stomach cancer, pleural puncture (n = 13) pointing to systemic lupus erythematosus in 1 patient, and pericardial puncture (n = 1) in 1 patient proving tuberculous pericarditis.

Predictors of likelihood of reaching a diagnosis

Univariate analysis (Table 6): For all parameters and PDCs, the value of predicting the likelihood of reaching a diagnosis was established with help of univariate analysis. Parameters that were significantly different between patients with a final diagnosis and patients without a diagnosis are listed in Table 6. Of all specific and nonspecific PDCs in the history

and physical examination, only night sweats reached statistical significance. There was also no significant difference between the 2 groups concerning sex, presence of PDCs, use of the screening diagnostic protocol, age, duration of fever, referral pattern, and fever pattern (continuous versus discontinuous).

TABLE 6. Significantly different parameters in patients with and without diagnosis(*)

Parameter (Number of Patients)	No Diagnosis (n = 50) Number(%)	Diagnosis (n = 117) Number (%)
Elevated ESR (164)	38 (76)	104 (90)
Abnormal Hb (167)	29 (58)	98 (84)
Abnormal sodium (164)	5 (10)	32 (28)
Lowered serum protein (151)	9 (19)	41 (39)
Abnormal protein electrophoresis (145)	29 (63)	92 (93)
Abnormal ASAT (167)	10 (20)	45 (39)
Proteinuria (151)	6 (14)	36 (33)
Night sweats (140)	40 (91)	70 (75)
Periodic fever (167)	28 (56)	28 (24)
Hospitalization (is less than or equal to) 21 days	26 (52)	34 (20)
Median hospitalization in days (range)	19 (7-83)	34 (7-295)

Abbreviations: ESR = erythocyte sedimentation rate; Hb = hemoglobin; ASAT = aspartate aminotransferase. (*) Using univariate analysis.

Logistic regression of prediction of possible diagnosis (Table 7): All values of the variables admitted in logistic regression were known in 92 patients. After stepwise selection, 3 variables remained in the logistic regression model: serum protein electrophoresis (1 = normal, 2 = abnormal), periodic fever (1 = 1 period, 2 = more than 1 period) and hemoglobin (Hb) (1 = normal, 2 = abnormal). In an additional 53 patients the values of serum protein electrophoresis, periodic fever, and Hb were known, while some of the other admitted variables had missing values. With the regression coefficients (1.83, -1.43, 1.21, respectively) and an intercept of -2.70, we estimated the probability of finding a diagnosis.

(TABULAR DATA NOT REPRODUCIBLE IN ASCII)

Discussion

In this study, we prospectively evaluated the utility of diagnostic techniques used in patients with FUO. In a retrospective study on FUO(9), we found that the use of diagnostic techniques was abundant, whereas in many cases the exact indication for the investigation could not be retrieved. The present study allows us to draw conclusions on the overall diagnostic value of many of these techniques, and by prospective registration of PDCs, estimate the screening diagnostic value of many of these techniques.

The merit of chemical investigations is mainly to direct the physician to the possible location of disease, making a more selective search possible; only rarely do these investigations lead directly to the diagnosis. In this study, 50% of the patients were found to have nonspecific liver disturbances, but in only 6 (4%) patients were specific liver diseases the cause of FUO. Thus, finding such disturbances is relatively meaningless. This is in agreement with data from earlier studies(23, 34) showing that abnormal liver tests in FUO are not predictive of a diagnostic liver biopsy.

The diagnostic yield of immunologic serology is also relatively low. Although antinuclear antibodies, rheumatoid factors, ACE, ANCA, antibody to dsDNA, and extractable nuclear antigen sometimes contributed to the diagnosis, these tests are more often false positive and are of little use without PDCs pointing to specific immunologic disorders. Mixed cryoglobulinemia turned out to be a rather common cause of FUO, even in patients without specific PDCs and underlying disorders. Thus, U& investigation seems worthwhile even in patients without PDCs.

In the literature, atypical subacute thyroiditis(42) and other masked thyroid diseases(44, 45) appear as a cause of FUO. Most of the patients reported did not have overt thyrotoxicosis but had some features of thyroid disease such as weight loss despite a good appetite and frequent bowel movements. This finding was confirmed in our series. It can be concluded that the diagnostic yield of thyroid testing without the presence of any PDCs for thyroid disease is very low.

In all published series on FUO, infections are the most common cause of FUO. The screening value of microbiological serology in patients without PDCs has never been studied before in patients with FUO. In our series of patients without PDCs for infection, the diagnostic yield of these tests appears to be very low. Such investigations should not be used as screening procedures early in the diagnostic process for patients without PDCs for specific infections. Serology for cytomegalovirus infection appears to be helpful only in patients with PDCs for cytomegalovirus infection (for example, atypical lymphocytosis), as previously described(32, 40). A relatively new technique used in this series is Western blot serology for Yersinia enterocolitica. Although occasionally helpful, its low specificity seems to limit the use in this group of patients.

The diagnostic yield of imaging procedures is often difficult to establish because the yield of these techniques depends on other investigations performed already. In our study we tried to avoid this problem by including a chest radiography and abdominal ultrasonography in the first obligatory part of the diagnostic protocol and by dividing the protocol into 2 stages. When there were pulmonary complaints or abnormalities at physical examination, the chest radiography was very useful, but even in patients without pulmonary disorders this simple technique was of use sometimes.

We included abdominal ultrasonography as an obligatory test in all included patients with FUO. Extrapolation of data presented by comparative studies on abdominal ultrasound and CT in the patient with FUO is hazardous. Only 1 study(33) tried to minimize systemic bias as to the type of examination performed last (the diagnostic yield of techniques is dependent on the techniques already used), by scheduling patients so that each examination was performed first in roughly one-third of patients. In this study it was found that the 2 modalities have a similar ability to detect local inflammation. We had several reasons for choosing ultrasonography instead of CT as an obligatory test: the relatively low cost, no radiation burden, little discomfort for the patient. In a substantial proportion of patients, upper abdominal ultrasonography was useful, and we feel this test should remain obligatory in the diagnostic workup of all patients with FUO. However, we should keep in mind that in a considerable proportion of patients, upper abdominal ultrasonography was false positive and led to unnecessary investigations. Ultrasonography of the pelvis was not useful in patients without PDCs and led to unnecessary investigations in some patients. When negative in a patient with prolonged fever, the abdominal ultrasonography has to be supplemented by abdominal CT in a later phase, which has a very high sensitivity. One has to be careful, however, not to overinterpret CT data because of the relatively low specificity. Unnecessary and invasive diagnostic procedures may be initiated. Sensitivity and specificity of abdominal and chest CT appear to be similar; the latter has not been studied previously in patients with FUO.

Not much is known about the value of echocardiography in patients with FUO. Our results show that in patients with more than 3 weeks of fever, the technique was useful only in patients with PDCs for cardiac abnormalities (that is, heart murmur, friction rub, or chest pain) and that it is not an appropriate technique to use early in the diagnostic process when such PDCs are absent.

Scintigraphic techniques were useful only in patients with PDCs for local inflammation or infection, as we have extensively discussed elsewhere(8). These techniques were useless as screening procedures in our population of patients.

Radiologic evaluation of the gastrointestinal tract can be valuable if performed in the proper setting. In our study it never was useful as a

screening procedure, and we believe it should not be used as a screening procedure in patients without abdominal PDCs. Even in the presence of microcytic anemia, abnormalities of the gastrointestinal tract were not responsible for the FUO in our series.

We used X-rays of the sinuses as a screening procedure, as advised by others(16, 38, 39, 43). The diagnostic yield was very low, and, in many patients, false positive findings led to unnecessary investigations.

Bone marrow aspiration was of little use in the absence of PDCs for a bone marrow disorder. Thus, as a screening procedure this technique is of little use, and anemia alone is certainly not a reason to perform this investigation in patients with FUO.

The diagnostic yield of liver biopsy in patients with FUO has been studied extensively in the past. It is likely that selected groups of patients with PDCs for liver abnormalities were studied. In our study, liver biopsy was part of the second stage of the screening diagnostic protocol and was performed in 9 patients without PDCs for liver abnormalities, yielding 1 case of unexplained granulomatous hepatitis. We are aware of the discussion whether the descriptive diagnosis "granulomatous hepatitis" is a real diagnosis or should be put in the "no diagnosis" group(30). In order not to conceal this interesting group of patients even though the causal relationship between granulomatous hepatitis and FUO is not clear, and, in most cases, the entity is secondary to a vast variety of diseases(15, 20), we did not classify this condition in the "no diagnosis" group. We feel that liver biopsy in the absence of PDCs may be of some use in a later stage of the diagnostic workup.

In our population of patients with FUO, bone marrow biopsy had a relatively high diagnostic yield when performed in a later stage of the diagnostic process, even in the absence of PDCs. We are not aware of other studies investigating the screening value of this technique.

Because temporal arteritis is an important cause of FUO in patients older than 50 years(30), we included temporal biopsy as a screening procedure in a later stage of the diagnostic protocol in patients older than 55 years. Despite this rigorous search, temporal arteritis was found in only 2 patients without PDCs and in 2 patients with typical complaints. Thus, in our study the diagnostic yield was not as high as in that of Knockaert and colleagues(30), who found temporal arteritis in 15% of the cases. In a late stage of workup and before starting empirical corticosteroids, it is justified to perform such a biopsy.

The role of the BAL in patients with FUO has not been elucidated. Although in most patients undergoing BAL, chest radiography was abnormal, the diagnostic yield was very low. Selection of patients was probably the most important reason for this low utility. The technique is used early in the diagnostic process of lung abnormalities, and patients in whom the procedure is useful will probably not classify as FUO.

In this study the screening value of small-intestinal biopsy was nil. It was also of little value in patients with abdominal complaints, probably because Crohn and Whipple disease and coeliac disease were not found in our series. We feel it should not be used as a screening procedure early in the diagnostic process.

Skin and skin-muscle biopsy had a diagnostic yield of 35% in our series, only when performed in patients with skin abnormalities and/or abnormal electromyography. Other studies on polyarteritis nodosa (PAN), systemic necrotizing vasculitis, and FUO(6, 35, 49) also showed that skin-muscle biopsy is useful only in suspect skin or muscle areas.

In our population, if lymphadenopathy was confined to the cervical or inguinal region (with negative X-ray of chest and abdominal ultrasound), lymph node biopsy was not helpful in establishing the diagnosis, in contrast to patients with generalized lymphadenopathy in whom it had a high yield.

Unlike in the study of Knockaert(30), blood cultures were still helpful in establishing the diagnosis of endocarditis in 2 of our patients. In both patients blood cultures became positive after the patient stopped taking empirically started antibiotics, an aspect already emphasized by others(3, 25, 40).

It can be concluded from our series that cultures of urine, of

sputum, and from other specific sites were useful only in patients with PDCs pointing to those sites. By performing screening cultures the risk of confusion with false-positive cultures is greater than the diagnostic yield.

Tuberculin skin testing was positive in 2 patients who turned out to have active tuberculosis; in a third patient with tuberculosis, a skin test was not performed. In none of the other patients was a positive purified protein derivative (PPD) found, reflecting the low prevalence of tuberculosis in our country. In other series tuberculin testing did not perform so well because of the high rates of false negative tests in patients with active tuberculosis (up to 25%)(37) and high rates of positive tests without active disease in certain subgroups like elderly patients(5) and immigrants from developing countries(47).

The importance of PDCs has been emphasized in many reviews of FUO. The attending physician is advised to observe the Sutton Law: "to go where the money is"(4, 13, 27, 36, 50). The value of PDCs has not been evaluated systematically before. Two retrospective studies showed significantly lower chances of reaching a diagnosis when no PDCs were present(9, 51). This was not confirmed in the present study, in which we prospectively registered and used PDCs and found that the presence of PDCs does not increase the likelihood of reaching a diagnosis. Because of the low percentage of patients without PDCs, these findings have to be interpreted carefully: we have no doubt that the search for PDCs remains the most important tool for the doctor to find the cause of FUO, but our study demonstrates that many of these PDCs are misleading and do not lead to a diagnosis. In univariate and logistic regression analysis of patients with and without a diagnosis, we found significant differences only for periodic or intermittent fever, erythrocyte sedimentation rate (ESR), and hemoglobin, in accordance with Knockaert(29). The chances of finding a diagnosis is significantly higher in patients with continuous fever, high ESR, and low hemoglobin. It is interesting to see that other PDCs and parameters, such as hepatosplenomegaly, age, duration of fever, the existence of PDCs, and the use of the screening diagnostic protocol, did not influence the likelihood of finding a diagnosis.

It was surprising that our diagnostic protocol was of use in 26% of the patients to whom it was applied. Indeed, this figure seems high, but when we look at the investigations that really are of diagnostic value when used as screening procedure, only a few should be used that way: temporal artery biopsy in patients older than 55 years, fundoscopy, sophisticated serology for Yersinia enterocolitica, serum for cryoglobulinemia in an early stage, and bone biopsy and abdominal and chest CT in a later stage of the diagnostic process. This means that the screening diagnostic protocol can be limited rigorously in the absence of PDCs.

Ordering investigations as screening procedures in the hope (mostly vain) that something abnormal will come up has many disadvantages, like possible adverse reactions or complications, loss of faith of the patient, staggering costs of testing, and -- perhaps most important -- a soporific effect on the doctor's diagnostic mental activities. Repeating a thorough history-taking, physical examination, and obligatory investigations and waiting for PDCs to appear probably is better than ordering more screening investigations in the hope that something abnormal will come up. Supportive treatment with nonsteroidal anti-inflammatory drugs. (NSAIDs) can be helpful at this stage. Only rarely do patients deteriorate while using NSAIDS without presenting new PDCs. In these rare patients, further diagnostic workup should be performed or a therapeutic trial with, for example, antibiotics, steroids, or antituberculous agents started.

Summary

From January 1992 until January 1994, we used a standardized diagnostic protocol for the 167 immunocompetent patients with fever of unknown origin (FUO) admitted on the internal medicine wards in all 8 university hospitals in the Netherlands. This protocol consisted of a standardized coded history and standardized physical examination for all 167 patients. A number of additional obligatory investigations had to be performed in the first week of admission for all patients, and all potentially diagnostic clues (PDCs) thus retrieved had to be registered. In

the presence of PDCs, specific investigations had to be performed based on the differential diagnosis. In the absence of PDCs or in the presence of only misleading PDCs, patients underwent a screening 2-staged diagnostic protocol.

In 162 (97%) patients, PDCs were present after 1 week of admission. In 61 patients these PDCs were all misleading. The likelihood of reaching a diagnosis in patients with PDCs was not significantly higher than that in patients without PDCs, probably because of the high proportion of misleading PDCs. The likelihood of establishing a diagnosis was significantly lower ((is less than) 10%) only for patients with recurrent fever, normal erythrocyte sedimentation rate (ESR), and normal hemoglobin. All other PDCs were not significantly different in patients with a diagnosis compared with patients without a diagnosis.

The screening 2-staged diagnostic protocol proved useful in 10 of 43 patients in whom it was used. The screening value of immunologic and microbiologic serology and endocrine investigations was nil; these investigations probably should be performed only when PDCs for the disease searched for are present. Scintigraphic techniques, echocardiography, and other imaging procedures were never helpful in our population in the absence of PDCs. Many patients with FUO had nonspecific anemia and disturbed liver chemistry. In the presence of these findings alone, without other more specific PDCs, the likelihood reaching a diagnosis with help of bone marrow aspiration was nil, and with help of liver biopsy, it was low. Enteric biopsy was never helpful. If lymphadenopathy was confined to the cervical or inguinal region (with negative chest X-ray and abdominal ultrasound), lymph node biopsy was not helpful, in contrast to patients having generalized lymphadenopathy, in whom the technique had a yield of 79%.

As shown in this study, the search for PDCs remains an important tool for establishing the diagnosis in patients with FUO, although in many cases these PDCs appear to be misleading. Directed diagnostic workup -- using the PDCs retrieved by repeated, meticulous history taking and physical examination -- remains the most efficient and intellectually satisfactory way to solve the problem of FUO in the individual patient. A standard protocol in patients with FUO in whom the obligatory investigations, as used by us, do not lead to the diagnosis can be limited to the tests that proved to be of some use as screening procedure: temporal biopsy in patients older than 55 years; fundoscopy; serology (Western blot) for Yersinia enterocolitica; serum for cryoglobulin at an early stage of the diagnostic process; and bone biopsy, liver biopsy, abdominal computed tomography (CT), and chest CT at a later stage. Repeating a thorough history-taking, physical examination, and obligatory investigations and waiting for PDCs to appear probably is better than ordering more screening investigations in the hope that something abnormal will come up. Supportive treatment with nonsteroidal anti-inflammatory drugs (NSAIDs) can be helpful at this stage. Only rarely do patients deteriorate while using NSAIDs without presenting new PDCs. In these rare patients, further diagnostic workup should be performed or a therapeutic trial with, for example, antibiotics, steroids, or antituberculous agents started.

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I. A prospective multicenter study of 167 patients with FUO, using fixed epidemiological entry criteria.(Fever of Unknown Origin (FUO))

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Introduction

Fever of unknown origin (FUO) is a challenging medical problem. Petersdorf and Beeson (30) defined FUO as an illness characterized by rectal temperature exceeding 38.3 (degrees) C on at least 3 occasions, evolving during at least 3 weeks, with no diagnosis reached after 1 week of inpatient investigation. Many retrospective (2, 4, 5, 12, 15, 18, 20, 28, 32, 34, 35) and a few prospective (1, 16, 19, 23, 25) studies of patients with FUO have been performed using this definition. Other series have used different criteria (3, 9-11, 14,17, 21, 24, 27, 31, 33, 36), and their results are more difficult to interpret. A more recently revised definition (8, 23, 29) that excludes immunocompromised patients has not been employed in major series yet.

The spectrum of diseases causing FUO not only seems to be determined by geographical factors, but also appears to change with time. In recent series, the proportion of patients in whom no diagnosis was made has increased compared with older series (23, 28). In addition, comparison is troublesome because, on the one hand, most studies do not use uniform epidemiologic entry criteria, thus possibly introducing unintended bias, and, on the other hand, differences in diagnostic workup can influence the outcome. Consequently, uniform entry criteria and continuous auditing for completeness are necessary, and a standardized diagnostic workup is preferable.

To update information on FUO and incorporate these new ideas, we conducted a prospective, 2-year study on patients with FUO in all 8 Dutch university hospitals, in which we excluded immunocompromised patients and used a standardized protocol to minimize diversity in diagnostic management. This protocol was based on retrospective analysis of diagnostic management (5) and an in-depth inquiry into diagnostic management among internists in the 8 Dutch university hospitals (6).

Methods

The present study was undertaken from January 1992 to January 1994. Because we wanted to enroll all admitted patients fulfilling criteria for FUO, without any unintended selection bias, 2 very broad initial selection criteria were used. First, all records of nonimmunocompromised patients with fever on the internal medicine wards in all 8 university hospitals in the Netherlands were reviewed for the Petersdorf criteria for FUO once a week (illness characterized by rectal temperature exceeding 38.3 (degrees) C, evolving during at least 3 weeks, with no diagnosis after 1 week of inpatient investigation). Total bed capacity of each of the 8 university hospitals ranged from 715 to 1,260 beds. Immuno-compromised patients were considered patients with neutropenia for at least 1 week within 3 months before the onset of fever (white blood cell count (is less than) 1.0 x 109/L and/or granulocyte (is less than) 0.5 x (10.sup.9)/L); human immunodeficiency virus (HIV)-positive patients; patients with known hypogammaglobulinemia: (IgG (is less than) 5096); and patients using the equivalent of more than 10 mg prednisone for at least 2 weeks. Second, as an additional cheek, all blood culture orders were reviewed weekly at the microbiologic laboratory, and the records of the patients in whom blood cultures were ordered were reviewed. The latter procedure was added because in a retrospective study (5) we found that in all patients with FUO, blood cultures were performed. After thus having identified all patients with fever, we applied the Petersdorf and Beeson criteria (30), as described above. By combining these 2 methods, we minimized the chance of missing patients who fulfilled FUO criteria.

The study was approved by all local ethic committees. After informed consent, patients were included in our FUO protocol, which consisted of a

standardized precoded history and standardized thorough physical examination. As a minimum, several additional investigations had to be performed in the first week of admission (Table 1). Much weight was given to the presence or absence of potentially diagnostic clues (PDCs), defined as all localizing signs, symptoms, and abnormalities potentially pointing toward a possible diagnosis, and the use of these PDCs in the diagnostic process. False PDCs are defined as PDCs eventually not leading to the definite diagnosis. History, physical examination, laboratory and technical investigations, the presence of PDCs, and their use in the diagnostic process were prospectively registered in a structured data collection form. If PDCs were present, appropriate investigations were performed. If PDCs were absent or false only, patients underwent a standardized diagnostic protocol (see Table 1).

TABLE 1. Diagnostic protocol

Obligatory investigations performed in all patients Sedimentation rate; hemoglobin; mean cellular volume; platelet count; leukocyte count and differential count; serum urea nitrogen; creatinine; sodium; potassium; protein; protein fractions; alkaline phosphatase; aminotransferase; lactate dehydrogenase; creatine phosphokinase; antinuclear antibodies; rheumatoid factors; urinary analysis; feces for occult blood; blood cultures aerobic and anaerobic (n = 3); tuberculin test; urine, feces, and sputum culture when indicated; chest X-ray; ultrasonography of upper abdomen

Phase 1 diagnostic protocol in patients without PDCs (n = 5) or with misleading PDCs only (n = 38) Pulse/rectal temperature measurement by observer, fundoscopy by an ophthalmologist; calcium, phosphate, urate, amylase, and TSH/T4; immunoelectrophoresis of serum and urine; CRP; ACE; ANCA, anti-dsDNA, ASO; cryoglobulin; C3, C4, CH50; serology for Cytomegalovirus, Epstein-Barr Virus, Mycoplasma, Bruccella, Toxoplasma, Borrelia, Coxiella, Treponema, Yersinia; blood cultures incubating (is greater than) 1 week; blood cultures, gastric fluid, urine cultures for tuberculosis; stools for worms, eggs, cysts; bone marrow puncture and culture for Mycobacteria, Brucella, Yersinia; In-111-IgG scintigraphy; X-Ray of sinus and teeth; ultrasonography of pelvis

Phase 2 diagnostic protocol in patients without PDCs (Performed when Phase 1 did not reveal PDCs or diagnosis) Hepatitis B serology; anergy tests; repeated chest X-ray; IgD in serum; liver biopsy and culture for Mycobacteria and other bacteria and fungi; crista biopsy and culture for Mycobacteria, Brucella, and common bacteria; echocardiography; CT of abdomen and chest; X-Ray colon; temporal artery biopsy in patients over 55 years

Abbreviations: TSH = thyroid-stimulating hormone; T4 = thyroxine; CRP = C-reactive peptide; ACE = angiotensin-converting enzyme; ANCA = antineutrophil cytoplasmic autoantibodies; ds-DNA = double-stranded deoxyribonucleic acid; ASO = antistrepment 0 test; C = complement; CH50 = total hemolytic complement; In-111-IgG = indium-111-labeled polyclonal human immunoglobulin G; CT = computed tomography-, PDCs = potentially diagnostic clues.

Within 1 week of inclusion in the study, every patient was seen by the first author in order to streamline the management of the patients. Patients did not have to remain admitted; after inclusion all investigations of the protocol could be performed on an outpatient basis. The patient's clinical condition was the major reason for a longer stay in the hospital, at the discretion of the attending physician. The final diagnosis was established by the attending physician and the first author. Definite diagnoses were established by positive serology, cultures, or histology. In some patients probable diagnoses were established by excluding other disease, by the response to specific therapy, or by studying the course of the disease. A long follow-up was deemed indispensable for all patients in whom a final definite diagnosis could not be made. A final follow-up was therefore performed more than 2 years later in March 1996, by analysis of the records of the patients, telephone calls to the treating physicians, and, in some cases, telephone calls to the patients themselves.

Recurrent fever was defined in this study as at least 2 episodes of

fever, with intervals of at least 48 hours without fever. Data were statistically analyzed and groups of patients compared with use of the Fisher exact test. A p value of (is less than) 0.05 (2-sided) was considered significant.

Results

Clinical features

During the 2-year period of study, 167 patients (80 male, 87 female) met the criteria for FUO. The median age was 53 years (range, 16-87 yr); 46 patients (28%) were older than 65 years. Of these patients, 139 patients were found by reviewing weekly the records of all patients with fever; in all of these patients blood cultures were done. By means of blood culture surveys an additional 28 patients were retrieved that fulfilled FUO criteria and were not recognized as such when checking the records.

Sixty-five (390/o) patients were referred by general practitioners and 64 (38%) had already undergone extensive investigations before referral to a university hospital, whereas 7 patients (49%) were referred by other departments within the university hospitals, and 31 patients (19%) were already known with other nonfebrile conditions at the university department. The proportion of patients in whom no diagnosis could be made was slightly lower, albeit not significantly, for patients referred by general practitioners (26%) than for secondarily referred patients (33%). For the 117 patients with a diagnosis, a diagnosis was established after a median of 60.5 days from the onset of fever (range, 21-1,584 d) in those referred by general practitioners, whereas in patients referred by non-university hospitals it took a median of 166 days (range, 22-3,347 d) ($p = 0.005$).

Median overall follow-up after admission was 854 days (range, 10-3,387 d). In 30 patients (180/o) follow-up was less than 0.5 years. Fifteen of these 30 patients died within this period, only 1 of them without a diagnosis. In the other 15 patients, diagnosis was proved in 14 patients. One patient with probable venous thrombosis as the cause of her fever could not be traced during follow-up. The median follow-up of 50 patients without a diagnosis and 48 patients with a probable diagnosis was 1,080 days (range, 15-3,387 d). In only 3 of these 98 patients was follow-up less than 1 year.

Median duration of hospitalization was 27 days (range, 7-295 d). The median duration of fever in the group of 117 patients in whom a diagnosis was made was 78.5 days range, 21-8,804 d). Of the 50 (30%) patients in whom no diagnosis was made, 37 patients recovered spontaneously after a median of 190 days range, 30-13,844 d). Thirteen patients remained febrile; these patients had a median duration of fever of 1,021 days (range, 481-5,281 d). Except for 1 patient, patients with persistent fever all had some form of recurrent fever.

Recurrent fever was present in 56 patients. In 28 of those patients (50%), no diagnosis could be established, in contrast to 22 of 111 patients (20%) with continuous fever (p (is less than) 0.0001).

In 67 patients the fever lasted longer than 6 months. In 37 (55%) patients no diagnosis could be made, in contrast to 18 of 100 (18%) patients with fever lasting less than 6 months (p (is less than) 0.0001).

Diagnosis and outcome

In the 117 patients in whom a diagnosis was made, the diagnostic phase in the university hospital (after referral) took a median of 33 days (range, 1-1,297 d). In 42 patients the diagnosis was made after discharge during follow-up because of new emerging facts. Of the 167 patients in this series, 20 patients died during follow-up: in 18 of them a diagnosis was made, in 4 not until after autopsy. All but 1 patient succumbed to the disease responsible for the FUO. Infections were found in 43 (26%) patients, neoplasms in 21 (13%), and noninfectious inflammatory diseases in 40 (24%) patients (Table 2).

TABLE 2. Final diagnoses in 167 patients with fever of unknown origin

Diagnostic Category	No. of Patients	(%)
Infections	43	(25.7)
Bacterial(*)		
Abscess/lung empyema(*)	6	

Urinary tract infections	5	
Endocarditis	4	
Atypical or recurrent pneumonia	6	
Tuberculosis	3	
Other bacterial infections	12	
Viral		
Cytomegalovirus infection	5	
Other viral infections(*)	2	
Fungal		
Disseminated cryptococcal infection	1	
Neoplasms(*)	21	(12.6)
Hematologic	14	
Solid	7	
Noninfectious inflammatory diseases	40	(24.0)
Collagen diseases	19	(11.4)
Adult-onset Still disease(*)	6	
Mixed cryoglobulinemia	5	
Other(*)	8	
Vasculitis syndromes	14	(8.4)
Temporal arteritis	4	
Other(*)	10	
Granulomatous diseases	7	(4.2)
Inflammatory bowel diseases	2	
Sarcoidosis	2	
Other(*)	3	
rag fever	3	(1.8)
Factitious fever	2	(1.2)
Miscellaneous(*)	8	(4.8)
No diagnosis	50	(29.9)
Spontaneous recovery	37	
Persistent fever	13	

(*) See Results Section for details. ((dagger)) One patient with urinary tract infection also.

Infections: In 4 patients, abscesses were the cause of fever. In 2 patients these were liver abscesses, caused in the first patient by Escherichia coli, Proteus mirabilis, and Bacteroides fragilis, while in the second patient the abscess was culture negative at autopsy after empirical antibiotic therapy. The delay of diagnosis in these patients was due to inconclusive ultrasound examinations. In the first patient, the second ultrasonography revealed multiple abscesses in the liver; in the other patient a biopsy of the liver yielded the diagnosis. In the last 2 patients pelvic abscesses were the cause of fever, caused in 1 patient by Peptococcus species, and in the other patient by Escherichia coli and Streptococcus milleri. In these patients the delay was due to failure to order pelvic ultrasonography because of the absence of lower abdominal pain.

There were 2 patients with pleural empyema. In 1, the chest radiography was incorrectly interpreted, resulting in a delay in the diagnosis. Scintigraphy and thoracic computed tomography (CT) led to the diagnosis, and culture of pleural fluid grew Peptococcus species. In the second patient, pleural fluid cultures were sterile, but pleural biopsies yielded Actinomyces species.

In 5 patients urinary tract infection turned out to be the cause of fever; 2 of them received antibiotics for other presumed infections at the time of the first urine culture. In both patients, urine cultures yielded Klebsiella pneumoniae eventually. In the third patient, recurrent prostatitis was found by transrectal sonography, and culture of prostatic secretion yielded Klebsiella pneumoniae. In the fourth patient, chronic xanthogranulomatous pyelonephritis with obstruction of the ureter was demonstrated by abdominal CT; cultures of urine and blood remained negative. In the fifth patient, balanitis accompanied the urinary infection, cultures yielded Escherichia coli, and, after circumcision, fever subsided.

Endocarditis was found in 4 patients. Culture-negative endocarditis occurred in 2 patients, and the diagnosis was not made until autopsy by

histology. In 1 of these 2 patients echocardiography had been negative, in the other echocardiography was not performed, because false PDCs were present. In the third patient, cultures became positive for Streptococcus bovis when empiric antibiotic therapy was stopped. In the fourth patient, blood cultures were not drawn in the referring hospital and empirical antibiotics were given. Because of deterioration the patient was referred to our hospital, and 2 days later blood cultures yielded Staphylococcus aureus.

In 6 patients a clinical picture of pneumonia was present. In all patients chest X-rays showed segmental infiltrates consistent with bronchopneumonia. In 3 patients bronchoscopy with culture of bronchial fluid and serology for respiratory viruses, Chlamydia, Legionella, Mycoplasma pneumoniae, and Coxiella burnetii were negative and thus no causative microorganism could be found. The first patient also had mediastinal lymphadenopathy and some pleural effusion and had already received extensive antibiotic therapy (cephalosporin, amoxicillin, flucloxacillin, and tobramycin) elsewhere without disappearance of fever. After referral, he recovered spontaneously after 8 weeks of fever. The second patient had received doxycycline, amoxicillin, gentamicin, cephazolin, and erythromycin without improvement of his condition. Isoniazid, rifampin, and pyrazinamide were given for 6 weeks without effect and stopped when cultures for tuberculosis remained negative. He recovered spontaneously over a 6-month period thereafter. The third patient was treated with penicilin, erythromycin, and rifampin for 4 weeks; after this period the patient's temperature was below 38 (degrees) C, antibiotic therapy was stopped, and the patient recovered further during the next 2 weeks. In the fourth patient with pneumonia, Haemophilus influenzae and Stenotrophomonas maltophilia were cultured first; after antibiotic therapy with cefuroxime, fever persisted. A second culture after stopping therapy revealed Moraxella cattarrhalis; antibiotic therapy with amoxicillin-clavulanate was successful. In the fifth patient, Pseadomonas aeroginosa was cultured. She was treated with ceftazidime intravenously, but fever persisted. Because of a history of tuberculosis in the past, she was then treated with isoniazid, pyrazinamide, and rifampin without result. Repeated bronchoscopic examination and culture of bronchial fluid yielded Pseudomonas aeroginosa again. After several weeks of therapy with ciprofloxacin, she recovered. In the sixth patient with pneumonia, Haemophilus influenzae and Stenotrophomonas maltophilia were cultured. Erythromycin had already been given empirically without any effect, and ciprofloxacin was added. By then Klebsiella pneumoniae had been cultured from the urine also. We concluded that this patient had 2 different infections causing the FUO. It took more than 20 days for her to recover and her temperature to normalize.

Tuberculosis was proved in 3 patients by culture. In the first patient, pericardial puncture revealed the diagnosis. In the second patient, a positive purified protein derivative (PPD) test and erythema nodosum suggested tuberculosis, but no localization seemed present after inclusion. A somatostatin scintigraphy was performed which showed activity high in the axilla. An ultrasonographic biopsy of enlarged axillary lymph nodes showed acid-fast bacilli. Cultures grew Myco-bacterium tuberculosis. The third patient had a recent history of breast cancer and bone metastasis, and lymphangitis carcinomatosis was suspected. Corticosteroids were administered empirically. Because of deterioration and in accordance with the diagnostic protocol, sputum cultures for tuberculosis were performed, which showed acid-fast bacilli. Cultures grew Mycobacterium tuberculosis eventually.

Cytomegalovirus infection was proved in 5 patients by serology (a fourfold elevation of IgG titer); in all but 1 patient lymphocytosis and atypical lymphocytes in the blood smear were found initially but false PDCs delayed the diagnostic process.

Other bacterial infections included persistent Yersinia enterocolitica infection (n = 2), diverticulitis (n = 2), recurrent sinusitis, cholangitis, adnexitis, bacterial meningitis in ventriculo-peritoneal drain with Escherichia coli, typhoid fever, occult dental infection, secondary syphilis, and infected central venous device

with Staph. epidermidis and Staph. aureus.

Neoplasms: In 14 patients hematologic malignancies were found. Hodgkin disease was the cause of fever in 5 patients. In 2 patients, the diagnostic process was delayed because their fevers were erroneously attributed to previously diagnosed diseases (systemic lupus erythematosus and sarcoidosis). In 2 others there was no lymphadenopathy, and diagnosis was made by bone marrow biopsy. In the fifth patient there was only mediastinal localization of Hodgkin disease. In 4 patients non-Hodgkin lymphomas were the cause of fever. In the first of these patients, very small abdominal lymph nodes were found by abdominal CT, 3 years after successful allogenic bone marrow transplantation. Positive yersinia serology (Western blot) delayed diagnostic laparotomy in a second patient with abdominal lymphadenopathy. The third patient had a 3-year history of recurrent fever. Only misleading PDCs were present during first admission in the university hospital, and, because fever subsided, the standardized diagnostic protocol was not used. During the next episode of fever, anemia developed and bone marrow biopsy revealed non-Hodgkin lymphoma. The fourth patient had an 18-year history of progressive polyneuropathy, telangiectasis, muscle weakness, hepatomegaly, and lymphadenopathy. Despite a large series of extensive investigations, a diagnosis was never established. She had never been febrile before inclusion in our study, when a malignant T-cell tumor was identified. Other hematologic malignancies were angio-immunoblastic lymphoma (n = 2), acute leukemia, acute myelofibrosis, and gamma-heavy-chain disease (Franklin disease).

In 7 patients a variety of solid tumors was responsible for the fever. Primary tumors were found in 2 patients, 1 with breast cancer and 1 with stomach cancer. Metastasis of breast cancer (n = 2), larynx cancer, and adenocarcinoma of unknown origin were found in 4 other patients. In the seventh patient, necrosis of a dermoid tumor in Gardner syndrome was responsible for the FUO.

Noninfectious inflammatory diseases

-- Collagen diseases: The diagnosis of adult-onset Still disease was made in 6 patients. All patients met the Medsger and Christy criteria for adult-onset Stir disease (26), but the diagnosis was made only after prolonged observation and exclusion of other diseases. Other collagen diseases found in this series were mixed cryoglobulinemia (n = 5), systemic lupus erythematosus (n = 2), reactive arthritis (n = 2), polymyalgia rheumatica (n = 1), relapse of polymyositis (n = 1), dermatomyositis (n = 1), and relapse of rheumatoid arthritis (n = 1).

-- Vasculitis syndromes: Temporal arteritis was found in 4 patients. Other vasculitis syndromes found in our series were hypersensitivity vasculitis (n = 3), polyangiitis overlap syndrome (n = 2), and Wegener disease (n = 2); Schnitzler disease (urticarial vasculitis with monoclonal Igm), vasculitis accompanying rheumatoid arthritis, and polyarteritis nodosa were found in 1 patient each.

-- Granulomatous diseases: Two patients had inflammatory bowel diseases, and 2 patients had sarcoidosis. In 2 patients granulomatous hepatitis was found, and in 1 patient granulomatous myositis was found, without underlying disease as cause of the fever.

Miscelianeous diseases: The miscellaneous group encompassed aseptic meningitis (Mollaret meningitis) without underlying disorders (n = 2); pseudogout (n = 2); and gout, venous thrombosis, hyperthyroidism, and allergic pneumonitis after radiation therapy, found in 1 patient each.

Diagnostic process

PDCs were present in 162 (970/o) patients. The 10 most common PDCs were relevant diseases in past (131 patients), weight loss (93 patients), relevant operation in past (68 patients), headache (62 patients), myalgia (58 patients), diarrhea (50 patients), vertigo (48 patients), arthralgia (48 patients), heart murmur (41 patients), pulmonary abnormalities (38 patients). These PDCs led to the diagnosis in 101 patients (62%). In 48 of these 101 patients, false PDCs were also present. In 13 patients a diagnosis was made despite the presence of false PDCs only. No clues were present in 5 patients, in 2 of whom no diagnosis was made. There was a small but not significant difference in reaching the diagnosis between patients with clues (730%) or patients without clues (600%).

In 16 patients without PDCs or with false PDCs only, diagnoses were made with the help of the standardized diagnostic protocol. More detailed information on PDCS and the use of the diagnostic protocol is found in our comparison article (6a) later in this issue.

Discussion

In this prospective multicenter study of 167 patients, FUO was due to infection in 26% of patients, neoplasms in 13%, noninfectious inflammatory diseases (NIID) in 240/o, and miscellaneous causes in 5%, whereas the diagnosis was not established in 30% of patients despite every effort. This is in agreement with the findings of our retrospective study in a single institution (5) and those of other recent series (23, 28), but in contrast to older reports (Table 3). There are a number of possible explanations for this phenomenon. First, 38% of patients were referred after undergoing extensive investigations elsewhere, comparable to the findings of Knockaert et al (280%) (23). in most series of FUO in the literature, exact data on referral patterns are lacking (1, 15, 25, 30, 32, 34). One could speculate that more difficult-to-diagnose cases are referred, with a lower chance of reaching a final diagnosis. In our series however, the proportion of patients without a diagnosis was only slightly higher in the referred group. It is more likely that the introduction of advanced diagnostic techniques had a major impact. In many patients who formerly would have been classified as having FUO because of difficulty in reaching a diagnosis, a diagnosis now is likely to be established. This is especially true for disease entities such as endocarditis, abdominal abscesses, and malignant lymphoma that can be diagnosed easily by ultrasonography, a technique used very early in the diagnostic process now. This leaves us with a group of patients fulfilling classical criteria, in whom a diagnosis is much more difficult to make with mostly self-limiting or benign fevers. There has also been a shift in diseases that cause fever. For instance, in nonimmunocompromised patients, tuberculosis has become relatively rare. Many infections in our series were due to common microorganisms. Petersdorf and Beeson (30) excluded these disorders because they represented common entities, but it is important for attending doctors to realize that FUO can be caused by such common diseases and microorganisms, which might be concealed by false PDCS or the use of antibiotics.

Compared with results of other series from university hospitals (20, 28, 30), tumors were not a common cause of FUO in the present study. This is in agreement with our retrospective survey and 1 other recent series (15, 23). This could be the result of the widespread use of advanced diagnostic techniques early in the diagnostic process -- for instance, ultrasonography, computed tomography, and serologic techniques. As expected, some hematologic malignancies remain difficult to diagnose because of the lack of localizing symptoms. Metastases can be very small, while causing FUO and other paraneoplastic symptoms (7). The diagnostic process in patients with a history of malignancy should be focused on recurrence of the tumor.

In contrast to other series, we used a dual method to find cases. In this way, all patients that presented with FUO were retrieved. It is of interest that 3 of the 6 prospectively conducted studies on FUO did not mention the way in which cases were retrieved (1, 25, 30), and methods in the other 3 studies (2, 16, 25) still show a degree of selection bias because no control system was used to avoid missing patients fulfilling FUO criteria. Of course, serious selection bias cannot be prevented in retrospective studies.

In accordance with the suggestions made by Durack and Street (8) and Petersdorf (29) we excluded immunocompromised patients with FUO, because these patients show an entirely different spectrum of diseases causing fever. One of the criteria for FUO is admission to hospital for 1 week, without a diagnosis being established. This is a time-related criterion, which may cause important differences as it is dependent on the experience of the doctor, the facilities, and differences in management between countries or even hospitals. The differences that can be caused by this criterion make comparison between different series difficult. In our opinion, the recommendation of Knockaert et al (23) and Durack and Street (8) to shorten this period to 3 days is not an improvement, for several

reasons. First, a better way to reduce bias is to change from a time-related criterion to a quality-related criterion that requires a list of certain investigations to be performed, as a minimum. We have used such a list (see Table 1). One could add directional investigations based on PDCS, performed within the first week of admission. Second, the major reason to classify patients with FUO as such is to indicate that we deal with a difficult or potentially difficult problem. In that context, maintaining the criterion of 1 week of clinical analysis seems appropriate to us, but perhaps in this regard a difference in admission policy between the Netherlands and the United States plays a role. Third, it is our experience that 3 days is often too short to exclude diseases that are easy to diagnose, because the results of cultures and serology often take more than 2-3 days.

Even if the criteria are adapted, comparing series of patients with FUO remains troublesome. Geographic factors (18, 32, 35), age distribution of the study population (11), referral pattern, hospital setting (16,20), and time and duration of study (changes in disease pattern and diagnostic management) influence the distribution of diagnostic categories. Selection bias increases when patients with FUO presenting at the outpatient department are included; prospective case finding is much harder to realize, and standardized diagnostic protocols are more difficult to implement. It would, however, be instructive to study this group of patients with a standardized protocol.

The median duration of hospitalization and of diagnostic phase was 27 days and 33 days, respectively. These figures are in accordance with figures presented by Knockaert et al (25 and 19 days, respectively) (23) and by our retrospective study (a median of 23 days of hospitalization) (5). In most other major series no such data are presented. In a review of patients with FUO in community hospitals, Kazardian (20) found that it took a median of 19 days to establish a diagnosis after a median duration of hospitalization of 1 1 days. It is possible that the difference between these data indicates a difference between the degree of difficulty of the patient groups.

The chance of reaching a diagnosis in patients with recurrent fever and fever lasting longer than 6 months is relatively low. This was also found by Knockaert et al (22).

Different nomenclature for the group of patients without infections or neoplasms has been used in series on FUO. Terms used include "rheumatic diseases," "multisystem diseases' (23), dyscollagenosis" (4,,35), "collagen diseases' (12, 15, 18, 30), "collagen vascular diseases" (1, 2, 13, 19, 20, 25), "connective tissue diseases" (16, 32, 34), and "inflammatory disorders" (8). Most series of FUO distinguish a category of diseases labeled as "collagen disorders," which includes vasculitis and autoimmune diseases. Since collagen is involved in only a few of these disorders, and an autoimmune nature is often difficult to prove, we would break a lance for using the term "noninfectious inflammatory diseases" (NIID) in the future. This category could also include granulomatous disorders, like inflammatory bowel disease and sarcoidosis, usually listed under miscellaneous disorders. A subdivision as presented in Tables 2 and 3 stir allows for comparison with older series. NIID accompanied by fever are often classified as FUO. In these diseases, fever may precede more typical manifestations or serologic evidence by months. Moreover, many of these diseases can only be diagnosed after prolonged observation and by exclusion.

TABLE 3. Diagnostic categories in fever of unknown origin, previous and present studies (%)

	Older Major Series		
	Ref.30	Ref.25	Ref.2
Diagnostic	1961	1982	1984
Category	(n = 100)	(n = 105)	(n = 133)
Infections	36	30	32
Neoplasms	19	31	20
Noninfectious inflammatory diseases	19	15	16
Collagen diseases	(13)	(5)	(3)
Vasculitis syndromes	(2)	(4)	(11)

Granulomatous diseases	(4)	(8)	(2)
Drug fever	1	0	0
Factitious fever	3	3	4
Miscellaneous	15	8	7
No diagnosis	7	13	21

	New Series	
Diagnostic Category	Ref.23 1992 (n = 199)	Present Study (n = 167)
Infections	22.7	25.7
Neoplasms	7.0	12.6
Noninfectious inflammatory diseases	23.1	24.0
Collagen diseases	(8.5)	(11.4)
Vasculitis syndromes	(10.6)	(8.4)
Granulomatous diseases	(4.0)	(4.2)
Drug fever	3.0	1.8
Factitious fever	3.5	1.2
Miscellaneous	15.1	4.8
No diagnosis	25.6	29.9

Summary

Internal medicine wards in all 8 university hospitals in the Netherlands participated in this prospective study of fever of unknown origin (FUO) from January 1992 until January 1994 in order to update information on the spectrum of diseases causing FUO.

We used fixed epidemiologic entry criteria to achieve completeness of enrollment and to avoid unintended selection bias. After entry, immunocompetent patients were included using criteria for FUO according to Petersdorf and Beeson (30). A standardized diagnostic protocol was used, and potentially diagnostic clues (PDCs) and their used in the diagnostic process were prospectively registered. Thus, the criteria of classic FUO have been adjusted to modern times: immunocompromised patients are excluded, and the time-criterion "I week in hospital without a diagnosis" has been replaced by a quality-criterion stating that certain investigations must be performed as a minimum, and PDCS must be followed adequately for at least 1 week, without a diagnosis being reached.

A total of 167 immunocompetent patients with FUO were thus retrieved, of whom 43 (25.79%) had infections, 21 (12.60/6) had neoplasms, and 40 (24.00%) had noninfectious inflammatory diseases. No diagnosis was made in 50 patients (29.90/o), 37 of whom recovered spontaneously.

This study confirms the changing spectrum of diseases causing FUO. Indeed, as shown by another recent study, the group of patients with FUO in whom no diagnosis can be made is expanding, and mostly it concerns self-limiting or benign fevers. Others have suggested that this trend is not really occurring (29). We did not place patients with diseases of unknown origin in the "nondiagnosis" group, and indeed made presumptive diagnoses when necessary. Nevertheless, this category of undiagnosed fevers is increasing. We believe that the higher percentage of undiagnosed cases can be attributed to the greater use of advanced diagnostic techniques attendant on an increased number of self-limited illnesses in patients meeting criteria for FUO. Because of ongoing development in diagnostic techniques and the prospective influence on the spectrum of diseases causing FUO, studies should be performed regularly to update information on this subject. Because the number of outpatient evaluations for FUO is expected to increase, patients seen on an outpatient basis should be included in future studies. To avoid unwanted selection bias, fixed epidemiologic entry criteria should be used to ensure completeness of enrollment. To shorten the period of collecting data, multicentric studies can be done using standardized diagnostic protocols.

In patients with recurrent fever or fever lasting longer than 6 months, the chance of reaching a diagnosis is significantly lower, and especially in this group one should exercise the greatest caution to avoid abundant and extensive diagnostic procedures.

The diagnostic process in patients with FUO remains an intriguing problem in medicine. Recent microbiologic techniques may be useful as an approach to the relatively large proportion of patients in whom we now fail

to make a diagnosis.

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SPECIAL FEATURES: table; illustration
DESCRIPTORS: Fever--Causes of
FILE SEGMENT: HI File 149
? t s4/3,kwic/17 21 22
>>>KWIC option is not available in file(s): 399

4/3,KWIC/17 (Item 1 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

140249749 CA: 140(16)249749m PATENT
Immunoassay for distinguishing ulcerative colitis from Crohn's disease by detecting the presence of fecal anti-neutrophil cytoplasmic antibodies (ANCA)
INVENTOR(AUTHOR): Boone, James Hunter; Lyerly, David Maxwell; Wilkins, Tracy Dale
LOCATION: USA
ASSIGNEE: Techlab, Inc.
PATENT: PCT International ; WO 200422713 A2 DATE: 20040318
APPLICATION: WO 2003US27798 (20030905) *US PV408809 (20020905)
PAGES: 18 pp. CODEN: PIXXD2 LANGUAGE: English
PATENT CLASSIFICATIONS:
CLASS: C12N-000/A
DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MA; MD; MG; MK; MN; MW; MX; MZ; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU; SC; SD; SE; SG; SK; SL; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; UZ; VC; VN; YU;

ZA; ZM; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ DESIGNATED REGIONAL: GH; GM; KE ; LS; MW; MZ; SD; SL; SZ; TZ; UG; ZM; ZW; AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LU; MC; NL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG

4/3,KWIC/21 (Item 2 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

01101357 **Image available**
METHOD FOR DISTINGUISHING ULCERATIVE COLITIS FROM CROHN'S DISEASE BY DETECTING THE PRESENCE OF FECAL ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODIES (ANCA)
METHODE DESTINEE A DISTINGUER LA RECTO-COLITE HEMORRAGIQUE DE LA MALADIE DE CROHN PAR DETECTION DE LA PRESENCE D'ANTICORPS CYTOPLASMIQUES ANTI-NEUTROPHILES (ANCA) FECAUX
Patent Applicant/Assignee:
TECHLAB INC, 1861 Pratt Drive, Suite 1030, Blacksburg, VA 24060-6364, US, US (Residence), US (Nationality)
Inventor(s):
BOONE James Hunter, 545 Arrowhead Trail, Christiansburg, VA 24073, US,
LYERLY David Maxwell, 204 MacArthur Avenue, Radford, VA 24141, US,
WILKINS Tracy Dale, 6254 Chestnut Ridge Road, Riner, VA 24149, US,
Legal Representative:
DICKMAN Jean M (et al) (agent), Shook, Hardy & Bacon L.L.P., 2555 Grand Blvd., Kansas City, MO 64108-2613, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200422713 A2-A3 20040318 (WO 0422713)
Application: WO 2003US27798 20030905 (PCT/WO US03027798)
Priority Application: US 2002408809 20020905
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE SI SK TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 4069

Fulltext Availability:
Detailed Description

Detailed Description
... S. Patent No. 6,218,120 discloses a method of determining the presence of serum ANCA as a marker to diagnose IBD.
However, it does not disclose a method for diagnosing...

...colitis in a patient diagnosed with IBD. Further, the method does not disclose testing human feces for the presence of ANCA.

Accordingly, there remains a need in the diagnostic industry for a non-invasive method of...

...methods
for differentiating between ulcerative colitis and Crohn's disease wherein the presence of fecal ANCA is used as a marker for ulcerative colitis.

In a further aspect, the present invention...

...linked immunoassays, that utilize antibodies specific to human immunoglobulins for the measurement of total endogenous ANCA in human
feces.

In yet another of its aspects, the present invention provides methods differentially diagnosing ulcerative colitis...
...its aspects, the present invention provides methods for diagnosing ulcerative colitis wherein the presence of ANCA is used as a marker for ulcerative colitis.

According to the present invention, the foregoing...

...disease in a patient presenting with IBD. In the method of the present invention, fecal ANCA are used as a marker and the
presence of ANCA indicates a differential diagnosis of ulcerative colitis. This rapid diagnosis may then be used by...

...by
immunoassays that utilize antibodies specific to human immunoglobulins for the measurement of total endogenous ANCA in human feces.

Additional aspects of the invention, together with the advantages and novel features appurtenant thereto, will...

...methods for
differentiating between ulcerative colitis and Crohn's disease using the presence of fecal ANCA as an indicator of ulcerative colitis. The present invention also is directed to a method...

...to immunoassays that utilize antibodies specific to human immunoglobulins for the
measurement of total endogenous ANCA in human feces. The particular
embodiments described herein are intended in all respects to be illustrative rather than...

...skilled in the art to which the present invention pertains without departing from its scope.

ANCA specific immunoassays may be used to differentiate ulcerative colitis and indeterminate colitis from Crohn's disease by measurement of the presence of total endogenous ANCA. In addition to fecal matter, a sample of whole blood, serum, plasma or other bodily fluid or tissue may be tested for ANCA to diagnose ulcerative colitis. This differential diagnosis may then be used by healthcare professionals for...

...in the differentiation of ulcerative colitis from Crohn's disease by determining the presence of ANCA as a marker of ulcerative colitis. The present invention is further drawn to immunoassays, e...

...enzymelinked immunoassays, that utilize antibodies specific to human immunoglobulins
for the measurement of total endogenous ANCA in human feces. The present
invention has been described in relation to particular embodiments which are 1 5...

4/3,KWIC/22 (Item 3 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

00356672
ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODY MATERIAL ASSOCIATED WITH ULCERATIVE COLITIS AND RELATED METHODS AND KITS
ANTICORPS CYTOPLASMIQUE ANTI-NEUTROPHILE ASSOCIE A LA RECTOCOLITE HEMORRAGIQUE, PROCEDES ET KITS CORRESPONDANTS
Patent Applicant/Assignee:
CEDARS-SINAI MEDICAL CENTER,
THE REGENTS OF THE UNIVERSITY OF CALIFORNIA,
Inventor(s):
BRAUN Jonathan,
EGGENA Mark P,
TARGAN Stephan R,
Patent and Priority Information (Country, Number, Date):
Patent: WO 9639186 A1 19961212
Application: WO 96US8756 19960605 (PCT/WO US9608756)
Priority Application: US 95688 19950606
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AL AM AT AU AZ BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IL IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN KE LS MW SD SZ UG AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG
Publication Language: English
Fulltext Word Count: 36742

Fulltext Availability:
Detailed Description

Detailed Description
... rat and human
colonic epithelial glycoproteins, intestinal bacterial polysaccharide, and antigens from germ-free rat feces have been reported to react with sera from patients with IBD

Other studies demonstrated an...

...been reported in these disorders, none other than the detection of anti-neutrophil cytoplasmic antibody ("ANCA" or more specifically "pANCA"
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? s (feces? or fecal? or stool?)/ti (100n) (antineutroph? or antisaccharo? or anca
or asca or panca )

Your SELECT statement is:
   s (feces? or fecal? or stool?)/ti (100n) (antineutroph? or antisaccharo?
or anca or asca or panca )

          Items   File
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              6     5: Biosis Previews(R)_1969-2007/Dec W5
              7    34: SciSearch(R) Cited Ref Sci_1990-2007/Jan W1
       Examined  50 files
       Examined 100 files
       Examined 150 files
              2   340: CLAIMS(R)/US Patent_1950-07/Jan 04
              1   345: Inpadoc/Fam.& Legal Stat_1968-2006/UD=200701
              1   348: EUROPEAN PATENTS_1978-2006/ 200701
              1   349: PCT FULLTEXT_1979-2006/UB=20070104UT=20061228
              1   399: CA SEARCH(R)_1967-2007/UD=14603
       Examined 200 files
       Examined 250 files
              1   654: US Pat.Full._1976-2007/Jan 09

   8 files have one or more items; file list includes 297 files.
   One or more terms were invalid in 99 files.

? save temp
Temp SearchSave "TB358368766" stored
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Your last SELECT statement was:
   S (FECES? OR FECAL? OR STOOL?)/TI (100N) (ANTINEUTROPH? OR ANTISACCHARO?
 OR ANCA OR ASCA OR PANCA )
Ref         Items   File
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N1              7    34: SciSearch(R) Cited Ref Sci_1990-2007/Jan W1
N2              6     5: Biosis Previews(R)_1969-2007/Dec W5
N3              2   340: CLAIMS(R)/US Patent_1950-07/Jan 04
N4              1   345: Inpadoc/Fam.& Legal Stat_1968-2006/UD=200701
N5              1   348: EUROPEAN PATENTS_1978-2006/ 200701
N6              1   349: PCT FULLTEXT_1979-2006/UB=20070104UT=20061228
N7              1   399: CA SEARCH(R)_1967-2007/UD=14603
N8              1   654: US Pat.Full._1976-2007/Jan 09
N9              0     2: INSPEC_1898-2007/Dec W3
N10             0     6: NTIS_1964-2007/Jan W1
   8 files have one or more items; file list includes 297 files.

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changes to the IC= index, see HELP NEWSIPCR.
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changes to the IC= index, see HELP NEWSIPCR.
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*File 340: The 2006 reload is online as of December 1, 2006.
IPCR/8 is available.
  File 345:Inpadoc/Fam.& Legal Stat 1968-2006/UD=200701
         (c) 2007 EPO
  File 399:CA SEARCH(R) 1967-2007/UD=14603
         (c) 2007 American Chemical Society
*File 399: Use is subject to the terms of your user/customer agreement.
IPCR/8 classification codes now searchable as IC=. See HELP NEWSIPCR.

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             18  ANTISACCHARO?
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            781  PANCA
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? t s2/6/all

 2/6/1     (Item 1 from file: 349)
01101357    **Image available**
METHOD FOR DISTINGUISHING ULCERATIVE COLITIS FROM CROHN'S DISEASE BY
      DETECTING THE PRESENCE OF %FECAL% ANTI-NEUTROPHIL CYTOPLASMIC
    ANTIBODIES (%ANCA%)
METHODE DESTINEE A DISTINGUER LA RECTO-COLITE HEMORRAGIQUE DE LA MALADIE DE
    CROHN PAR DETECTION DE LA PRESENCE D'ANTICORPS CYTOPLASMIQUES
    ANTI-NEUTROPHILES (ANCA) FECAUX
Publication Language: English
Filing Language: English
Fulltext Availability:
  Detailed Description
  Claims
Fulltext Word Count: 4069
Publication Year: 2004


 2/6/2     (Item 1 from file: 348)
01731586
METHOD FOR DISTINGUISHING ULCERATIVE COLITIS FROM CROHN S DI SEASE BY
      DETECTING THE PRESENCE OF %FECAL% ANTI-NEUTROPHIL CYTOPLASMIC
    ANTIBODIES (%ANCA%)
```

VERFAHREN ZUR UNTERSCHEIDUNG VON COLITIS ULCEROSA VON MORBUS CROHN DURCH NACHWEIS DES VORLIEGENS VON FuKALEN ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODIES (ANCA)
METHODE DESTINEE A DISTINGUER LA RECTO-COLITE HEMORRAGIQUE DE LA MALADIE DE CROHN PAR DETECTION DE LA PRESENCE D'ANTICORPS CYTOPLASMIQUES ANTI-NEUTROPHILES (ANCA) FECAUX
LANGUAGE (Publication,Procedural,Application): English; English; English

2/6/3 (Item 1 from file: 34)
15759938 Genuine Article#: 086EH Number of References: 0
Title: %Fecal% %ASCA% measurements in the assessment of pediatric patients with known or suspected Crohn's disease
Publication date: 20060900

2/6/4 (Item 2 from file: 34)
14407716 Genuine Article#: 964BK Number of References: 0
Title: Measurement of %ASCA%, lactoferrin and Clostridium difficile in %feces% of patients with IBD
Publication date: 20050900

2/6/5 (Item 3 from file: 34)
14147297 Genuine Article#: 919LK Number of References: 0
Title: %Fecal% %ASCA% is a potentially useful non-invasive diagnostic test to discriminate between Crohn's disease and other diarrheal illnesses.
Publication date: 20050400

2/6/6 (Item 4 from file: 34)
14147249 Genuine Article#: 919LK Number of References: 0
Title: Measurement of %fecal% lactoferrin, anti-saccharomyces cerevisiae antibody (%ASCA%) and anti-neutrophil cytoplasmic antigen antibody (%ANCA%) in non-IBD patients and healthy control subjects
Publication date: 20050400

2/6/7 (Item 5 from file: 34)
13664156 Genuine Article#: 862GW Number of References: 0
Title: The detection of lactoferrin, %ASCA%, and %ANCA% in %feces% is useful for assessing pediatric IBD patients
Publication date: 20041000

2/6/8 (Item 6 from file: 34)
13052494 Genuine Article#: 813EK Number of References: 0
Title: Measurement of anti-neutrophil cytoplasmic antibodies (%ANCA%) in human %feces% as an indicator of ulcerative colitis
Publication date: 20040400

2/6/9 (Item 7 from file: 34)
11991109 Genuine Article#: 675CR Number of References: 0
Title: %Fecal% anti-saccharomyces cerevisiae antibodies (%ASCA%) - Evaluation of a new diagnostic test in pediatric patients with inflammatory bowel disease
Publication date: 20030400

2/6/10 (Item 1 from file: 5)
0014622750 BIOSIS NO.: 200300573427
%FECAL% ANTI-SACCHAROMYCES CEREVISIAE ANTIBODIES (%ASCA%): EVALUATION OF A NEW DIAGNOSTIC TEST IN PEDIATRIC PATIENTS WITH INFLAMMATORY BOWEL DISEASE.

2003

2/6/11 (Item 1 from file: 340)
10630310 2004-0039979
C/INFLAMMATORY BOWEL DISEASE AND IRRITABLE BOWEL SYNDROME IBD-FIRST CHEK DIAGNOSTIC PANEL; FOR THE MEASUREMENT OF TOTAL ENDOGENOUS LACTOFERRIN, ANTI-SACCHAROMYCES CEREVISIAE ANTIBODIES (%ASCA%) AND ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODIES (%ANCA%) IN HUMAN %FECES%; KITS

2/6/12 (Item 2 from file: 340)
10619674 2004-0036759
C/METHOD FOR DISTINGUISHING ULCERATIVE COLITIS FROM CROHN'S DISEASE BY DETECTING THE PRESENCE OF %FECAL% ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODIES (%ANCA%); USING NON-INVASIVE BIOASSAY/IMMUNOASSAY FOR DIFFERENTIATING BETWEEN CLINICAL SUBTYPES OF INFLAMMATORY BOWEL DISEASE

2/6/13 (Item 1 from file: 345)
19747195
Basic Patent (No,Kind,Date): CA 2497883 AA 20040318
METHOD FOR DISTINGUISHING ULCERATIVE COLITIS FROM CROHN'S DISEASE BY DETECTING THE PRESENCE OF FECAL ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODIES (ANCA) METHODE DESTINEE A DISTINGUER LA RECTO-COLITE HEMORRAGIQUE DE LA MALADIE DE CROHN PAR DETECTION DE LA PRESENCE D'ANTICORPS CYTOPLASMIQUES ANTI-NEUTROPHILES (ANCA) FECAUX (English; French)
Applic (No,Kind,Date): CA 2497883 A 20030905

2/6/14 (Item 1 from file: 399)
DIALOG(R)File 399:(c) 2007 American Chemical Society. All rts. reserv.

Immunoassay for distinguishing ulcerative colitis from Crohn's disease by detecting the presence of fecal anti-neutrophil cytoplasmic antibodies (ANCA)
? t s2/3/2

2/3/2 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2007 European Patent Office. All rts. reserv.

01731586
METHOD FOR DISTINGUISHING ULCERATIVE COLITIS FROM CROHN S DI SEASE BY DETECTING THE PRESENCE OF %FECAL% ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODIES (%ANCA%)
VERFAHREN ZUR UNTERSCHEIDUNG VON COLITIS ULCEROSA VON MORBUS CROHN DURCH NACHWEIS DES VORLIEGENS VON FuKALEN ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODIES (ANCA)
METHODE DESTINEE A DISTINGUER LA RECTO-COLITE HEMORRAGIQUE DE LA MALADIE DE CROHN PAR DETECTION DE LA PRESENCE D'ANTICORPS CYTOPLASMIQUES ANTI-NEUTROPHILES (ANCA) FECAUX
PATENT ASSIGNEE:
Techlab, Inc., (3142611), 1861 Pratt Drive, Suite 1030, Blacksburg, VA 24060-6364, (US), (Applicant designated States: all)
INVENTOR:
BOONE, James, Hunter, 545 Arrowhead Trail, Christiansburg, VA 24073, (US)
LYERLY, David, Maxwell, 204 MacArthur Avenue, Radford, VA 24141, (US)
WILKINS, Tracy, Dale, 6254 Chestnut Ridge Road, Riner, VA 24149, (US)
LEGAL REPRESENTATIVE:
Ede, Eric (61981), Fitzpatricks 1 Blythswood Square, Glasgow G2 4AD, (GB)
PATENT (CC, No, Kind, Date): EP 1539791 A2 050615 (Basic)
WO 2004022713 040318
APPLICATION (CC, No, Date): EP 2003749438 030905; WO 2003US27798 030905

...its aspects, the present invention provides methods for diagnosing ulcerative colitis wherein the presence of %%%ANCA%%% is used as a marker for ulcerative colitis.

According to the present invention, the foregoing...

...disease in a patient presenting with IBD. In the method of the present invention, fecal %%%ANCA%%% are used as a marker and the presence of %%%ANCA%%% indicates a differential diagnosis of ulcerative colitis. This rapid diagnosis may then be used by...

...by immunoassays that utilize antibodies specific to human immunoglobulins for the measurement of total endogenous %%%ANCA%%% in human %%%feces%%%.

Additional aspects of the invention, together with the advantages and novel features appurtenant thereto, will...

...methods for differentiating between ulcerative colitis and Crohn's disease using the presence of fecal %%%ANCA%%% as an indicator of ulcerative colitis. The present invention also is directed to a method...

...to immunoassays that utilize antibodies specific to human immunoglobulins for the measurement of total endogenous %%%ANCA%%% in human %%%feces%%%. The particular embodiments described herein are intended in all respects to be illustrative rather than...

...skilled in the art to which the present invention pertains without departing from its scope.

%%%ANCA%%% specific immunoassays may be used to differentiate ulcerative colitis and indeterminate colitis from Crohn's disease by measurement of the presence of total endogenous %%%ANCA%%%. In addition to fecal matter, a sample of whole blood, serum, plasma or other bodily fluid or tissue may be tested for %%%ANCA%%% to diagnose ulcerative colitis. This differential diagnosis may then be used by healthcare professionals for...

...in the differentiation of ulcerative colitis from Crohn's disease by determining the presence of %%%ANCA%%% as a marker of ulcerative colitis. The present invention is further drawn to immunoassays, e...

...enzymelinked immunoassays, that utilize antibodies specific to human immunoglobulins for the measurement of total endogenous %%%ANCA%%% in human %%%feces%%%. The present invention has been described in relation to particular embodiments which are 1 5...

4/3,KWIC/22 (Item 3 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00356672
ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODY MATERIAL ASSOCIATED WITH ULCERATIVE COLITIS AND RELATED METHODS AND KITS
ANTICORPS CYTOPLASMIQUE ANTI-NEUTROPHILE ASSOCIE A LA RECTOCOLITE HEMORRAGIQUE, PROCEDES ET KITS CORRESPONDANTS
Patent Applicant/Assignee:
CEDARS-SINAI MEDICAL CENTER,
THE REGENTS OF THE UNIVERSITY OF CALIFORNIA,
Inventor(s):
BRAUN Jonathan,
EGGENA Mark P,
TARGAN Stephan R,
Patent and Priority Information (Country, Number, Date):
Patent: WO 9639186 A1 19961212

Application: WO 96US8756 19960605 (PCT/WO US9608756)
Priority Application: US 95688 19950606
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AL AM AT AU AZ BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IL IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN KE LS MW SD SZ UG AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG
Publication Language: English
Fulltext Word Count: 36742

Fulltext Availability:
Detailed Description

Detailed Description
... rat and human colonic epithelial glycoproteins, intestinal bacterial polysaccharide, and antigens from germ-free rat %%%feces%%% have been reported to react with sera from patients with IBD

Other studies demonstrated an...

...been reported in these disorders, none other than the detection of anti-neutrophil cytoplasmic antibody ("%%%ANCA%%%" or more specifically "pANCA"
? logoff hold
09jan07 15:10:42 User228206 Session D2667.3
$5.39 1.585 DialUnits File155
$0.00 4 Type(s) in Format 6
$0.88 4 Type(s) in Format 9
$0.88 8 Types
$6.27 Estimated cost File155
$8.49 1.415 DialUnits File5
$0.00 2 Type(s) in Format 6
$0.00 2 Types
$8.49 Estimated cost File5
$35.27 1.418 DialUnits File34
$35.27 Estimated cost File34
$0.56 0.135 DialUnits File35
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$1.17 0.233 DialUnits File45
$1.17 Estimated cost File45
$0.28 0.069 DialUnits File65
$0.28 Estimated cost File65
$1.20 0.129 DialUnits File71
$1.20 Estimated cost File71
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$7.91 Estimated cost File73
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$0.11 0.032 DialUnits File94
$0.11 Estimated cost File94
$0.08 0.019 DialUnits File98
$0.08 Estimated cost File98
$0.10 0.019 DialUnits File135
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$0.17 0.038 DialUnits File144
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$0.00 2 Type(s) in Format 6
$7.10 2 Type(s) in Format 9
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$7.38 Estimated cost File149
$0.22 0.038 DialUnits File156
$0.22 Estimated cost File156
$0.11 0.035 DialUnits File159
$0.11 Estimated cost File159

Completed processing all files
14 S15
36046423 PY=2003 : PY=2006
S16 14 S15/2003:2006
? t s15/free/all
>>>"FREE" is not a valid format name in file(s): 123, 324, 347-349, 399, 652, 654

15/8/1 (Item 1 from file: 155)
DIALOG(R)File 155:(c) format only 2006 Dialog. All rts. reserv.

20902886 PMID: 16385247
Combined use of noninvasive tests is useful in the initial diagnostic approach to a child with suspected inflammatory bowel disease.
Jan 2006
Tags: Female; Male
Descriptors: *Antibodies, Antineutrophil Cytoplasmic--analysis--AN; *Antibodies, Fungal--analysis--AN; *Diagnostic Tests, Routine--standards --ST; *Inflammatory Bowel Diseases--diagnosis--DI; *Leukocyte L1 Antigen Complex--analysis--AN; Adolescent; Child; Colitis, Ulcerative--diagnosis --DI; Colitis, Ulcerative--immunology--IM; Colitis, Ulcerative--pathology --PA; Comparative Study; Crohn Disease--diagnosis--DI; Crohn Disease --immunology--IM; Crohn Disease--pathology--PA; Diagnosis, Differential; Diagnostic Tests, Routine--methods--MT; Feces--chemistry--CH; Humans; Inflammatory Bowel Diseases--immunology--IM; Inflammatory Bowel Diseases --pathology--PA; Intestine, Small--pathology--PA; Intestine, Small --physiology--PH; Intestine, Small--ultrasonography--US; Permeability; Reproducibility of Results; Saccharomyces cerevisiae--immunology--IM; Sensitivity and Specificity
CAS Registry No.: 0 (Antibodies, Antineutrophil Cytoplasmic); 0 (Antibodies, Fungal); 0 (Leukocyte L1 Antigen Complex)

15/8/2 (Item 1 from file: 5)
0015865142 BIOSIS NO.: 200600210537
Measurement of fecal lactoferrin, anti-saccharomyces cerevisiae antibody (ASCA) and anti-neutrophil cytoplasmic antigen antibody (ANCA) in non-IBD patients and healthy control subjects
2005

15/8/3 (Item 2 from file: 5)
0015738641 BIOSIS NO.: 200600084036
Measurement of anti-neutrophil cytoplasmic antibodies (ANCA) in human feces as an indicator of ulcerative colitis
2004

15/8/4 (Item 3 from file: 5)
0015550582 BIOSIS NO.: 200510245082
The detection of lactoferrin, ASCA, and ANCA in feces is useful for assessing pediatric IBD patients
2004

15/8/5 (Item 1 from file: 34)
DIALOG(R)File 34:(c) 2007 The Thomson Corp. All rts. reserv.

13664156 Genuine Article#: 862GW Number of References: 0
Title: The detection of lactoferrin, ASCA, and ANCA in feces is useful for assessing pediatric IBD patients
Publication date: 20041000
Journal Subject Category: GASTROENTEROLOGY & HEPATOLOGY

15/8/6 (Item 1 from file: 73)
14183289 EMBASE No: 2006589904
Antibodies to I2 predict clinical response to fecal diversion in Crohn's disease
2006

15/8/7 (Item 2 from file: 73)
13040282 EMBASE No: 2005102251
Non-invasive markers of inflammatory bowel disease (IBD) in children
NIET-INVASIEVE MARKERS BIJ INFLAMMATOIRE DARMZIEKTEN OP DE KINDERLEEFTIJD
2005

15/8/8 (Item 3 from file: 73)
12012499 EMBASE No: 2003123364
Laboratory tests in inflammatory bowel disease
LABORDIAGNOSTIK BEI CHRONISCH ENTZUNDLICHEN DARMERKRANKUNGEN
2003

15/8/9 (Item 1 from file: 340)
10630310 2004-0039979
C/INFLAMMATORY BOWEL DISEASE AND IRRITABLE BOWEL SYNDROME IBD-FIRST CHEK DIAGNOSTIC PANEL; FOR THE MEASUREMENT OF TOTAL ENDOGENOUS LACTOFERRIN, ANTI-SACCHAROMYCES CEREVISIAE ANTIBODIES (ASCA) AND ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODIES (ANCA) IN HUMAN FECES; KITS
? t s15/3/9

15/3/9 (Item 1 from file: 340)
DIALOG(R)File 340:CLAIMS(R)/US Patent
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10630310 2004-0039979
C/INFLAMMATORY BOWEL DISEASE AND IRRITABLE BOWEL SYNDROME IBD-FIRST CHEK DIAGNOSTIC PANEL; FOR THE MEASUREMENT OF TOTAL ENDOGENOUS LACTOFERRIN, ANTI-SACCHAROMYCES CEREVISIAE ANTIBODIES (ASCA) AND ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODIES (ANCA) IN HUMAN FECES; KITS
Inventors: Boone James Hunter (US); Lyerly David Maxwell (US); Wilkins Tracy Dale (US)
Assignee: Unassigned Or Assigned To Individual
Assignee Code: 68000
Probable Assignee (A1): TECHLAB Inc
Attorney, Agent or Firm: JEAN M. DICKMAN;SHOOK, HARDY & BACON L.L.P., One Kansas City Place, 1200 Main Street, Kansas City, MO, 64105-2118, US

	Publication Number	Kind	Date	Application Number	Date
	US 20040137536	A1	20040715	US 2003693377	20031024
Priority Applic:				US 2003693377	20031024
Provisional Applic:				US 60-421395	20021025

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$0.00 3 Type(s) in Format 6
$0.00 3 Types
$1.55 Estimated cost File5
$12.09 0.486 DialUnits File34
$0.00 1 Type(s) in Format 8
$0.00 1 Types

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     $1.65  Estimated cost File347
            $1.44    0.265 DialUnits File348
     $1.44  Estimated cost File348
            $0.98    0.206 DialUnits File349
     $0.98  Estimated cost File349
            $0.78    0.048 DialUnits File353
     $0.78  Estimated cost File353
            $0.24    0.048 DialUnits File371
     $0.24  Estimated cost File371
            $0.77    0.044 DialUnits File447
     $0.77  Estimated cost File447
            $0.41    0.055 DialUnits File652
     $0.41  Estimated cost File652
            $1.39    0.236 DialUnits File654
     $1.39  Estimated cost File654
            $1.23    0.037 DialUnits File670
     $1.23  Estimated cost File670
            OneSearch, 42 files,  8.281 DialUnits FileOS
     $1.86  TELNET
    $80.99  Estimated cost this search
    $81.02  Estimated total session cost   8.643 DialUnits
Logoff: level 05.15.00 D  15:03:41


Connecting via Winsock to Dialog


Logging in to Dialog

Trying 31060000009998...Open

DIALOG INFORMATION SERVICES
PLEASE LOGON:
 ********
ENTER PASSWORD:
 ********
Welcome to DIALOG

Dialog level 05.15.00D

Last logoff:  09jan07 15:03:41
Logon file405 09jan07 15:04:38
* * *
SYSTEM:HOME
Cost is in DialUnits
Menu System II: D2 version 1.8.0 term=ASCII
                    *** DIALOG HOMEBASE(SM) Main Menu ***

 Information:
  1.  Announcements (new files, reloads, etc.)
  2.  Database, Rates, & Command Descriptions
  3.  Help in Choosing Databases for Your Topic
  4.  Customer Services (telephone assistance, training, seminars, etc.)
  5.  Product Descriptions

 Connections:
  6.  DIALOG(R) Document Delivery
  7.  Data Star(R)

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      /H = Help            /L = Logoff          /NOMENU = Command Mode
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Enter an option number to view information or to connect to an online
 service.  Enter a BEGIN command plus a file number to search a database
(e.g., B1 for ERIC).
? b 410

       09jan07 15:04:38 User228206 Session D2666.1
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     $0.00  Estimated total session cost   0.234 DialUnits

File 410:Dialog Comm.-of-Interest News1/Jul (c) 2006 Dialog

      Set  Items  Description
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? set hi ;set hi
HILIGHT set on as ''
HILIGHT set on as ''
? e feces

Ref    Items  Index-term
E1         1  FEB88
E2         1  FEC
E3         1 *FECES
E4       131  FECHA
E5        19  FECHAS
E6        30  FED
E7         2  FEDBIZOPPS
E8       567  FEDERAL
E9        19  FEDERALLY
E10       12  FEDERATION
E11        1  FEDERER
E12        8  FEDERICO

          Enter P or PAGE for more
? s e3
      S1       1  'FECES'
? e fecal

Ref    Items  Index-term
E1         1  FEB88
E2         1  FEC
E3         0 *FECAL
E4         1  FECES
E5       131  FECHA
E6        19  FECHAS
E7        30  FED
E8         2  FEDBIZOPPS
E9       567  FEDERAL
E10       19  FEDERALLY
E11       12  FEDERATION
E12        1  FEDERER

          Enter P or PAGE for more
? logoff
       09jan07 15:05:08 User228206 Session D2666.2
            $0.00    0.463 DialUnits File410
     $0.00  Estimated cost File410
     $0.26  TELNET
     $0.26  Estimated cost this search
     $0.26  Estimated total session cost   0.697 DialUnits
Logoff: level 05.15.00 D  15:05:08
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Connecting via Winsock to Dialog


Logging in to Dialog

Trying 31060000009998...Open

DIALOG INFORMATION SERVICES
PLEASE LOGON:
 ********
ENTER PASSWORD:
 ********
Welcome to DIALOG

Dialog level 05.15.00D

Last logoff:  09jan07 15:05:08
Logon file405 09jan07 15:05:26
* * *
SYSTEM:HOME
Cost is in DialUnits
Menu System II: D2 version 1.8.0 term=ASCII
                    *** DIALOG HOMEBASE(SM) Main Menu ***

 Information:
  1.  Announcements (new files, reloads, etc.)
  2.  Database, Rates, & Command Descriptions
  3.  Help in Choosing Databases for Your Topic
  4.  Customer Services (telephone assistance, training, seminars, etc.)
  5.  Product Descriptions

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      /H = Help            /L = Logoff          /NOMENU = Command Mode


Enter an option number to view information or to connect to an online
 service.  Enter a BEGIN command plus a file number to search a database
(e.g., B1 for ERIC).
? b 410

       09jan07 15:05:26 User228206 Session D2667.1
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     $0.00  Estimated cost FileHomeBase
     $0.00  Estimated cost this search
     $0.00  Estimated total session cost   0.234 DialUnits

File 410:Dialog Comm.-of-Interest Newsl/Jul (c)2006 Dialog

      Set  Items  Description
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? set hi ;set hi
HILIGHT set on as ''
HILIGHT set on as ''
? b 155 medicine patents
>>>         138 is unauthorized
>>>         351 is unauthorized
>>>         352 is unauthorized
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         (c) format only 2006 Dialog
*File 155: MEDLINE has temporarily stopped updating with UD=20061206.
Please see HELP NEWS154 for details.
  File   5:Biosis Previews(R) 1969-2007/Dec W5
         (c) 2007 The Thomson Corporation
  File  34:SciSearch(R) Cited Ref Sci 1990-2007/Dec W5
         (c) 2007 The Thomson Corp
  File  35:Dissertation Abs Online 1861-2006/Nov
         (c) 2006 ProQuest Info&Learning
  File  45:EMCare 2007/Dec W5
         (c) 2007 Elsevier B.V.
  File  65:Inside Conferences 1993-2007/Jan 09
         (c) 2007 BLDSC all rts. reserv.
  File  71:ELSEVIER BIOBASE 1994-2007/Jan W1
         (c) 2007 Elsevier B.V.
  File  73:EMBASE 1974-2007/Jan 09
         (c) 2007 Elsevier B.V.
*File  73: Elsevier will not provide an update to Embase on
January 1, 2007.
  File  91:MANTIS(TM) 1880-2006/Jan
         2001 (c) Action Potential
  File  94:JICST-EPlus 1985-2007/Jan W1
         (c)2007 Japan Science and Tech Corp(JST)
*File  94: UD200609W2 is the last update for 2006. UD200701W1 is the
first update for 2007. The file is complete and up to date.
  File  98:General Sci
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SYSTEM:OS  - DIALOG OneSearch
  File 155:MEDLINE(R) 1951-2005/Dec 07
         (c) format only 2005 Dialog
*File 155: Medline has ceased updating as of UD 20051207, until        e
the reload is complete. Please see HELP NEWS 154 for details.
  File   5:Biosis Previews(R) 1969-2005/Dec W3
         (c) 2005 BIOSIS
  File  34:SciSearch(R) Cited Ref Sci 1990-2005/Dec W3
         (c) 2005 Inst for Sci Info
  File  35:Dissertation Abs Online 1861-2005/Nov
         (c) 2005 ProQuest Info&Learning
  File  48:SPORTDiscus 1962-2005/Jul
         (c) 2005 Sport Information Resource Centre
*File  48: This file will be removed from DIALOG on December 31, 2005.
  File  65:Inside Conferences 1993-2005/Dec W3
         (c) 2005 BLDSC all rts. reserv.
  File  71:ELSEVIER BIOBASE 1994-2005/Dec W3
         (c) 2005  Elsevier Science B.V.
  File  73:EMBASE 1974-2005/Dec 23
         (c) 2005 Elsevier Science B.V.
  File  91:MANTIS(TM) 1880-2005/Jun
         2001 (c) Action Potential
  File  94:JICST-EPlus 1985-2005/Oct W3
         (c)2005 Japan Science and Tech Corp(JST)
  File  98:General Sci Abs/Full-Text 1984-2004/Dec
         (c) 2005 The HW Wilson Co.
  File 135:NewsRx Weekly Reports 1995-2005/Dec W3
         (c) 2005 NewsRx
*File 135: Please see HELP NEWS135 for information on select
journal titles.
  File 144:Pascal 1973-2005/Dec W2
         (c) 2005 INIST/CNRS
  File 149:TGG Health&Wellness DB(SM) 1976-2005/Dec W2
         (c) 2005 The Gale Group
  File 156:ToxFile 1965-2005/Nov W2
         (c) format only 2005 Dialog
  File 159:Cancerlit 1975-2002/Oct
         (c) format only 2002 Dialog
*File 159: Cancerlit is no longer updating.
Please see HELP NEWS159.
  File 162:Global Health 1983-2005/Nov
         (c) 2005 CAB International
  File 164:Allied & Complementary Medicine 1984-2005/Dec
         (c) 2005 BLHCIS
  File 172:EMBASE Alert 2005/Dec 23
         (c) 2005 Elsevier Science B.V.
  File 266:FEDRIP 2005/Dec
        Comp & dist by NTIS, Intl Copyright All Rights Res
  File 369:New Scientist 1994-2005/Aug W2
         (c) 2005 Reed Business Information Ltd.
  File 370:Science 1996-1999/Jul W3
         (c) 1999 AAAS
*File 370: This file is closed (no updates). Use File 47 for more current
information.
  File 399:CA SEARCH(R) 1967-2005/UD=14326
         (c) 2005 American Chemical Society
*File 399: Use is subject to the terms of your user/customer agreement.
Alert feature enhanced for multiple files, etc. See HELP ALERT.
  File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
         (c) 1998 Inst for Sci Info
  File 444:New England Journal of Med. 1985-2005/Dec W2
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Connecting via Winsock to Dialog


Logging in to Dialog

Trying 31060000009998...Open

DIALOG INFORMATION SERVICES
PLEASE LOGON:
 ********
ENTER PASSWORD:
 ********
Welcome to DIALOG

Dialog level 05.15.00D

Last logoff:  04jan07 18:15:38
Logon file405 09jan07 14:56:33
          *** ANNOUNCEMENTS ***
                    ***
NEW FILES RELEASED
***Engineering Index Backfile (File 988)
***Verdict Market Research (File 769)
***EMCare (File 45)
***Trademarkscan - South Korea (File 655)

RESUMED UPDATING
***File 141, Reader's Guide Abstracts
                   ***
RELOADS COMPLETED
***Files 340, 341 & 942, CLAIMS/U.S. Patents - 2006 reload now online
***Files 173 & 973, Adis Clinical Trials Insight
***File 11, PsycInfo
***File 531, American Business Directory
                                 ***
DATABASES REMOVED
***File 196, FINDEX
***File 468, Public Opinion Online (POLL)
Chemical Structure Searching now available in Prous Science Drug
Data Report (F452), Prous Science Drugs of the Future (F453),
IMS R&D Focus (F445/955), Pharmaprojects (F128/928), Beilstein
Facts (F390), Derwent Chemistry Resource (F355) and Index Chemicus
(File 302).
                   ***
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 >>>http://www.dialog.com/whatsnew/.  You can find news about<<<
 >>>a specific database by entering HELP NEWS <file number>.<<<
* * *
SYSTEM:HOME
Cost is in DialUnits
Menu System II: D2 version 1.8.0 term=ASCII
                     *** DIALOG HOMEBASE(SM) Main Menu ***

 Information:
  1.  Announcements (new files, reloads, etc.)
  2.  Database, Rates, & Command Descriptions
  3.  Help in Choosing Databases for Your Topic
  4.  Customer Services (telephone assistance, training, seminars, etc.)
  5.  Product Descriptions

 Connections:
  6.  DIALOG(R) Document Delivery
  7.  Data Star(R)
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/H = Help /L = Logoff /NOMENU = Command Mode

Enter an option number to view information or to connect to an online service. Enter a BEGIN command plus a file number to search a database (e.g., B1 for ERIC).
? b 410

09jan07 14:56:34 User228206 Session D2665.1
$0.00 0.245 DialUnits FileHomeBase
$0.00 Estimated cost FileHomeBase
$0.00 Estimated cost this search
$0.00 Estimated total session cost 0.245 DialUnits

File 410:Dialog Comm.-of-Interest Newsl/Jul (c) 2006 Dialog

Set Items Description
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? set hi ;set hi
HILIGHT set on as ''
HILIGHT set on as ''
? b 155 medicine patents
>>> 138 is unauthorized
>>> 351 is unauthorized
>>> 352 is unauthorized
>>>3 of the specified files are not available
09jan07 14:56:42 User228206 Session D2665.2
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$0.03 Estimated cost this search
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SYSTEM:OS - DIALOG OneSearch
File 155:MEDLINE(R) 1950-2006/Dec 06
(c) format only 2006 Dialog
*File 155: MEDLINE has temporarily stopped updating with UD=20061206.
Please see HELP NEWS154 for details.
File 5:Biosis Previews(R) 1969-2007/Dec W5
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File 34:SciSearch(R) Cited Ref Sci 1990-2007/Dec W5
(c) 2007 The Thomson Corp
File 35:Dissertation Abs Online 1861-2006/Nov
(c) 2006 ProQuest Info&Learning
File 45:EMCare 2007/Dec W5
(c) 2007 Elsevier B.V.
File 65:Inside Conferences 1993-2007/Jan 09
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File 71:ELSEVIER BIOBASE 1994-2007/Jan W1
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File 73:EMBASE 1974-2007/Jan 09
(c) 2007 Elsevier B.V.
*File 73: Elsevier will not provide an update to Embase on January 1, 2007.
File 91:MANTIS(TM) 1880-2006/Jan
2001 (c) Action Potential
File 94:JICST-EPlus 1985-2007/Jan W1
(c)2007 Japan Science and Tech Corp(JST)
*File 94: UD200609W2 is the last update for 2006. UD200701W1 is the first update for 2007. The file is complete and up to date.
File 98:General Sci Abs 1984-2006/Dec
(c) 2006 The HW Wilson Co.

File 135:NewsRx Weekly Reports 1995-2007/Dec W5
(c) 2007 NewsRx
File 144:Pascal 1973-2006/Dec W1
(c) 2006 INIST/CNRS
File 149:TGG Health&Wellness DB(SM) 1976-2007/Dec W4
(c) 2007 The Gale Group
File 156:ToxFile 1965-2006/Nov W1
(c) format only 2006 Dialog
*File 156: ToxFile has stopped updating with MEDLINE records. Please see HELP NEWS 154 for details.
File 159:Cancerlit 1975-2002/Oct
(c) format only 2002 Dialog
*File 159: Cancerlit is no longer updating.
Please see HELP NEWS159.
File 162:Global Health 1983-2007/Dec
(c) 2007 CAB International
File 164:Allied & Complementary Medicine 1984-2007/Jan
(c) 2007 BLHCIS
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File 266:FEDRIP 2006/Dec
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File 369:New Scientist 1994-2007/Oct W2
(c) 2007 Reed Business Information Ltd.
File 370:Science 1996-1999/Jul W3
(c) 1999 AAAS
*File 370: This file is closed (no updates). Use File 47 for more current information.
File 399:CA SEARCH(R) 1967-2007/UD=14603
(c) 2007 American Chemical Society
*File 399: Use is subject to the terms of your user/customer agreement.
IPCR/8 classification codes now searchable as IC=. See HELP NEWSIPCR.
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
(c) 2006 The Thomson Corp
File 444:New England Journal of Med. 1985-2007/Dec W4
(c) 2007 Mass. Med. Soc.
File 467:ExtraMED(tm) 2000/Dec
(c) 2001 Informania Ltd.
File 123:CLAIMS(R)/Current Legal Status 1980-2007/Jan 02
(c) 2007 IFI/CLAIMS
*File 123: Reassignment data is now updated weekly.
File 324:German Patents Fulltext 1967-200701
(c) 2007 Univentio
*File 324: For important information about IPCR/8 and forthcoming changes to the IC= index, see HELP NEWS IPCR.
File 331:Derwent WPI First View UD=200702 (c) 2007 The Thomson Corp.
*File 331: For patent family information, search also File 351, 352, or 350.
File 340:CLAIMS(R)/US Patent 1950-07/Jan 04
(c) 2007 IFI/CLAIMS(R)
*File 340: The 2006 reload is online as of December 1, 2006.
IPCR/8 is available.
File 342:Derwent Patents Citation Indx 1978-07/200682
(c)2007 The Thomson Corp.
File 344:Chinese Patents Abs Jan 1985-2006/Jan
(c) 2006 European Patent Office
File 345:Inpadoc/Fam.& Legal Stat 1968-2006/UD=200701
(c) 2007 EPO
File 347:JAPIO Dec 1976-2006/Sep(Updated 061230)
(c) 2007 JPO & JAPIO
File 348:EUROPEAN PATENTS 1978-2006/ 200701
(c) 2007 European Patent Office
*File 348: For important information about IPCR/8 and forthcoming changes to the IC= index, see HELP NEWSIPCR.
File 349:PCT FULLTEXT 1979-2006/UB=20070104UT=20061228

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         (c) 2007 WIPO/Thomson
*File 349: For important information about IPCR/8 and forthcoming
changes to the IC= index, see HELP NEWSIPCR.
  File 353:Ei EnCompassPat(TM) 1964-200701
         (c) 2007 Elsevier Eng. Info. Inc.
*File 353: Ei EnCompassPat/Ei EnCompassLit combined usage is
limited to 2 hrs/yr.
  File 371:French Patents 1961-2002/BOPI 200209
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*File 371: This file is not currently updating. The last update is 200209.
  File 447:IMS Patent Focus 2006/Sep
         (c) 2006 IMS Health & Affiliates
  File 652:US Patents Fulltext 1971-1975
         (c) format only 2002 Dialog
  File 654:US Pat.Full. 1976-2007/Jan 04
         (c) Format only 2007 Dialog
*File 654: IPCR/8 classification codes now searchable in 2006 records.
For information about IC= index changes, see HELP NEWSIPCR.
  File 670:LitAlert 1973-2007/UD=200615A
         (c) 2007 The Thomson Corp.

      Set  Items  Description
      ---  -----  -----------
? e anca

Ref    Items    RT  Index-term
E1     18310     7 *ANCA
E2         1       ANCA A NEW TABLE GRAPE-D CULTIVAR
E3         2       ANCA AND VASCULITIS
E4         5       ANCA ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODIES
E5         5       ANCA ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODY
E6         2       ANCA ANTI-NEUTROPHIL CYTOPLASMIC AUTOANTIBODY
E7         1       ANCA ANTIBODIES
E8         2       ANCA ANTIBODY
E9         1       ANCA ANTIBODY ANTI NEUTROPHIL CYTOPLASMIC ANTI
E10        3       ANCA ANTIGEN
E11        6       ANCA ANTIGENS
E12        4       ANCA ANTINEUTROPHIL CYTOPLASM ANTIBODY

         Enter P or PAGE for more
? s e4-e9 or e12
              5  ANCA ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODIES
              5  ANCA ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODY
              2  ANCA ANTI-NEUTROPHIL CYTOPLASMIC AUTOANTIBODY
              1  ANCA ANTIBODIES
              2  ANCA ANTIBODY
              1  ANCA ANTIBODY ANTI NEUTROPHIL CYTOPLASMIC ANTI
              4  ANCA ANTINEUTROPHIL CYTOPLASM ANTIBODY
      S1     20  E4-E9 OR E12
? s e1
      S2  18310  'ANCA'
? e e1

Ref    Items Type  RT  Index-term
R1      8101        7 *ANCA
R2      3635   X   30  ANTIBODIES, ANTINEUTROPHIL CYTOPLASMIC
R3         1   F    1  ANTINEUTROPHIL CYTOPLASMIC ANTIBODY
R4     13157   B    5  AUTOANTIBODY
R5      3699   U   20  NEUTROPHIL CYTOPLASMIC ANTIBODY
? s r1:r3 or r5
             9450  ANCA:ANTINEUTROPHIL CYTOPLASMIC ANTIBODY
             3699  NEUTROPHIL CYTOPLASMIC ANTIBODY
      S3    11298  R1:R3 OR R5
? e asca
```

```
Ref    Items  Index-term
E1         4  ASC/TMS1
E2         1  ASC:SIL RATIO
E3      6284 *ASCA
E4         3  ASCA (ACARINA)
E5         1  ASCA AND RXTE OBSERVATIONS
E6         1  ASCA ANNANDALEI (ACARINA)
E7         1  ASCA ANTI-OMPC
E8         3  ASCA ANTI-SACCHAROMYCES CEREVISIAE ANTIBODIES
E9         7  ASCA ANTI-SACCHAROMYCES CEREVISIAE ANTIBODY
E10        2  ASCA ANTIBODIES
E11        3  ASCA ANTIBODY
E12        2  ASCA ANWENJUI (ACARINA)

          Enter P or PAGE for more
? s e3 or s7 or e8 or e9 or e10 or e11
>>>"S7" does not exist
             6284  ASCA
                0  S7
                3  ASCA ANTI-SACCHAROMYCES CEREVISIAE ANTIBODIES
                7  ASCA ANTI-SACCHAROMYCES CEREVISIAE ANTIBODY
                2  ASCA ANTIBODIES
                3  ASCA ANTIBODY
      S4     6284  'ASCA' OR S7 OR 'ASCA ANTI-SACCHAROMYCES CEREVISIAE
                   ANTIBODIES' OR 'ASCA ANTI-SACCHAROMYCES CEREVISIAE
                   ANTIBODY' OR 'ASCA ANTIBODIES' OR 'ASCA ANTIBODY'
? p

Ref    Items  Index-term
E13        2  ASCA APHIDIOIDES (ACARINA)
E14        1  ASCA AVIANIDA (ACARINA)
E15        1  ASCA DORSOPOROSA (ACARINA)
E16        1  ASCA GANDAHANA (ACARINA)
E17        1  ASCA GARMANI (ACARINA)
E18        3  ASCA GENE
E19        1  ASCA GROSTALI (ACARINA)
E20        1  ASCA GROSTALI N.SP.
E21        1  ASCA IBASILEONILA (ACARINA)
E22        1  ASCA IDIOBASIS (ACARINA)
E23        1  ASCA IGA
E24        1  ASCA IGA ASCA IMMUNOGLOBULIN A

          Enter P or PAGE for more
? s e23 or e24
                1  ASCA IGA
                1  ASCA IGA ASCA IMMUNOGLOBULIN A
      S5        2  'ASCA IGA' OR 'ASCA IGA ASCA IMMUNOGLOBULIN A'
? p

Ref    Items  Index-term
E25        1  ASCA IGG
E26        1  ASCA IGG ASCA IMMUNOGLOBULIN G
E27        1  ASCA IV
E28        1  ASCA KOSUNGENSIS (ACARINA)
E29        1  ASCA LONGISETA (ACARINA)
E30        1  ASCA MACROMELA (ACARINA)
E31        1  ASCA MACROMELA N.SP.
E32        2  ASCA MEASUREMENTS
E33        1  ASCA MINDANENSIS (ACARINA)
E34        1  ASCA MINDI (ACARINA)
E35        1  ASCA MINDI N.SP.
E36        1  ASCA MUSCICOLA (ACARINA)

          Enter P or PAGE for more
? s e25 or e26 or e27
```

```
                1  ASCA IGG
                1  ASCA IGG ASCA IMMUNOGLOBULIN G
                1  ASCA IV
      S6        3  'ASCA IGG' OR 'ASCA IGG ASCA IMMUNOGLOBULIN G' OR 'ASCA
                   IV'
? e panca

Ref    Items  Index-term
E1         1  PANC-89 CELLS
E2         1  PANC-9 CELL LINE (HOMINIDAE)
E3      1720 *PANCA
E4         3  PANCA ANTIBODIES
E5         3  PANCA ANTIBODY
E6         1  PANCA ANTIGEN
E7         1  PANCA ANTIGENS
E8         1  PANCA ANTINEUTROPHIL CYTOPLASMIC ANTIGEN
E9         1  PANCA AUTOANTIBODY
E10        1  PANCA CORE EPITOPE
E11        1  PANCA GENE
E12        2  PANCA IN IBD

          Enter P or PAGE for more
? s e3or e4 or e5
                0  E3OR E4
                3  PANCA ANTIBODY
      S7        3  E3OR E4 OR 'PANCA ANTIBODY'
? s e12 or e9 or e8
                2  PANCA IN IBD
                1  PANCA AUTOANTIBODY
                1  PANCA ANTINEUTROPHIL CYTOPLASMIC ANTIGEN
      S8        4  'PANCA IN IBD' OR 'PANCA AUTOANTIBODY' OR 'PANCA
                   ANTINEUTROPHIL CYTOPLASMIC ANTIGEN'
? p

Ref    Items  Index-term
E13        1  PANCA MONOCLONAL ANTIBODIES
E14        1  PANCA P-ANTINEUTROPHIL CYTOPLASMIC ANTIBODIES
E15        5  PANCA PERINUCLEAR ANTI-NEUTROPHIL CYTOPLASMIC
E16        4  PANCA PERINUCLEAR ANTINEUTROPHIL CYTOPLASMIC A
E17        1  PANCA PLASMA ANTINEUTROPHIL CYTOPLASMIC ANTIBO
E18        1  PANCA TITER
E19        1  PANCA VASCULITIS
E20        1  PANCA-LIKE
E21        2  PANCA-POSITIVE
E22        1  PANCA-POSITIVE PULMO-RENAL SYNDROME
E23        1  PANCA-REACTIVE FRAGMENT
E24        1  PANCA-RELATED

          Enter P or PAGE for more
? s e13-e18
                1  PANCA MONOCLONAL ANTIBODIES
                1  PANCA P-ANTINEUTROPHIL CYTOPLASMIC ANTIBODIES
                5  PANCA PERINUCLEAR ANTI-NEUTROPHIL CYTOPLASMIC
                4  PANCA PERINUCLEAR ANTINEUTROPHIL CYTOPLASMIC A
                1  PANCA PLASMA ANTINEUTROPHIL CYTOPLASMIC ANTIBO
                1  PANCA TITER
      S9       13  E13-E18
? p

Ref    Items  Index-term
E25        4  PANCAA
E26        1  PANCABHUTA
E27        1  PANCACAKE
E28        4  PANCACEA
E29        1  PANCACES
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```
E30        3  PANCACKED
E31        1  PANCACKES
E32        1  PANCACYL
E33        6  PANCADAS
E34        1  PANCADENA
E35        4  PANCADER
E36        1  PANCADES

          Enter P or PAGE for more
? ds

Set     Items   Description
S1         20   E4-E9 OR E12
S2      18310   'ANCA'
S3      11298   R1:R3 OR R5
S4       6284   'ASCA' OR S7 OR 'ASCA ANTI-SACCHAROMYCES CEREVISIAE ANTIBO-
             DIES' OR 'ASCA ANTI-SACCHAROMYCES CEREVISIAE ANTIBODY' OR 'AS-
             CA ANTIBODIES' OR 'ASCA ANTIBODY'
S5          2   'ASCA IGA' OR 'ASCA IGA ASCA IMMUNOGLOBULIN A'
S6          3   'ASCA IGG' OR 'ASCA IGG ASCA IMMUNOGLOBULIN G' OR 'ASCA IV'
S7          3   E3OR E4 OR 'PANCA ANTIBODY'
S8          4   'PANCA IN IBD' OR 'PANCA AUTOANTIBODY' OR 'PANCA ANTINEUTR-
             OPHIL CYTOPLASMIC ANTIGEN'
S9         13   E13-E18
? s s1 or s2 or s3 or s7 or s8 or s9
            20  S1
         18310  S2
         11298  S3
             3  S7
             4  S8
            13  S9
    S10  21524  S1 OR S2 OR S3 OR S7 OR S8 OR S9
? s s4 or s5 or s6
          6284  S4
             2  S5
             3  S6
    S11   6284  S4 OR S5 OR S6
? s s10 and s11
         21524  S10
          6284  S11
    S12    352  S10 AND S11
? e feces

Ref   Items   RT  Index-term
E1        1       FECERY
E2        1       FECERZUNGE
E3   232330   38 *FECES
E4        1       FECES --ABNORMALITIES --AB
E5    13507       FECES --ANALYSIS --AN
E6        1       FECES --ANATOMY AND HISTOLOGY --AH
E7     7654       FECES --CHEMISTRY --CH
E8      193       FECES --CYTOLOGY --CY
E9       49       FECES --DRUG EFFECTS --DE
E10     709       FECES --ENZYMOLOGY --EN
E11     299       FECES --IMMUNOLOGY --IM
E12     464       FECES --METABOLISM --ME

          Enter P or PAGE for more
? s e3:e12
    S13  232329  'FECES':'FECES --METABOLISM --ME'
? e e3

Ref   Items Type  RT  Index-term
R1   141520       38 *FECES
R2      627   R    4  DEFECATION
```

```
R3      7831    R     3  DIARRHEA
R4      9200    B     7  HUMAN EXCRETA
R5      4230    R     3  INTESTINAL CONTENT
R6     14062    R     5  MANURE
R7      1018    N     2  MECONIUM
R8      1480    R     3  GASTROINTESTINAL CONTENTS
R9       240    R        WASTE SOLIDS,NIGHT SOIL
R10    10409             DC=A12
R11        3    B   276  FLUIDS, EXCRETA AND SECRETIONS
R12        0    S     2  FAECAL EXCRETION

          Enter P or PAGE for more
? p

Ref    Items Type  RT  Index-term
R13     6686    S     2  FAECES
R14        0    S     2  FECAL EXCRETION
R15    15921    S     2  STOOL
R16     6656    S     2  STOOLS
R17    61203    X        DC=A12.459.
R18       43    R     5  DIGESTIVE TRACT CONTENTS
R19     2044    R    10  GASTROINTESTINAL CONTENTS
R20     4478    R     7  MANURE
R21     5193    N     8  MECONIUM
R22     3143    N    15  MELENA
R23      211    N     4  MECONIUM
? p
>>>Related terms display completed...
? s r1:r23
>>>One or more prefixes are unsupported
>>>  or undefined in one or more files.
     S14  203650  R1:R23
? ds

Set     Items   Description
S1         20   E4-E9 OR E12
S2      18310   'ANCA'
S3      11298   R1:R3 OR R5
S4       6284   'ASCA' OR S7 OR 'ASCA ANTI-SACCHAROMYCES CEREVISIAE ANTIBO-
             DIES' OR 'ASCA ANTI-SACCHAROMYCES CEREVISIAE ANTIBODY' OR 'AS-
             CA ANTIBODIES' OR 'ASCA ANTIBODY'
S5          2   'ASCA IGA' OR 'ASCA IGA ASCA IMMUNOGLOBULIN A'
S6          3   'ASCA IGG' OR 'ASCA IGG ASCA IMMUNOGLOBULIN G' OR 'ASCA IV'
S7          3   E3OR E4 OR 'PANCA ANTIBODY'
S8          4   'PANCA IN IBD' OR 'PANCA AUTOANTIBODY' OR 'PANCA ANTINEUTR-
             OPHIL CYTOPLASMIC ANTIGEN'
S9         13   E13-E18
S10     21524   S1 OR S2 OR S3 OR S7 OR S8 OR S9
S11      6284   S4 OR S5 OR S6
S12       352   S10 AND S11
S13    232329   'FECES':'FECES --METABOLISM --ME'
S14    203650   R1:R23
? s s12 and (s13 or s14)
             352  S12
          232329  S13
          203650  S14
     S15      14  S12 AND (S13 OR S14)
? s s15/2003:2006
>>>One or more prefixes are unsupported
>>>  or undefined in one or more files.
>>>Year ranges not supported in one or more files
Processing
Processed  30 of  42 files ...
Processing
Processed  40 of  42 files ...
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Set      Items   Description
S1       14302   'STOOL'
S2       24333   'FECAL'
S3       10684   E1-E3
S4       28081   E3-E4
S5         304   E1-E6
S6       55187   E3-E24
S7       65024   R1:R6
S8         163   E25-E35
S9      116251   S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8
S10        223   'PANCA'
S11       2832   'ANCA'
S12       3845   R1:R2
S13     104359   R1:R9
S14        126   'ASCA'
S15          3   'ANTISACCHAROMYCES'
S16         65   'SACCHAROMYCES --IMMUNOLOGY --IM'
S17        445   'SACCHAROMYCES CEREVISIAE --ISOLATION AND PURIF' OR 'SACCH-
             AROMYCES CEREVISIAE --PATHOGENICITY --PY'
S18          1   'SACCHAROMYCES CEREVISIAE PROTEINS --DIAGNOSTIC'
S19         20   'SACCHAROMYCES CEREVISIAE PROTEINS --IMMUNOLOGY'
S20          0   S9 AND (S10 OR S11 OR S12 OR S13) AND (S15 OR S16 OR S17 OR
               S18 OR S19)
S21         14   S9 AND ANCA
S22       1388   S9 AND ASCA?
S23          6   S9 AND ASCA
S24        782   S9 AND (S10 OR S11 OR S12 OR S13) NOT S21
S25      14421   S9 (10N) (S10 OR S1 OR S12 OR S13)
S26        782   S9 AND (S10 OR S11 OR S12 OR S13) NOT S21
S27         95   S26 AND (UC OR IBD OR CD OR CROHN?)
S28          3   S27 AND (S14 OR S15 OR S16 OR S18 OR S19)
S29      10066   'PMN'
S30      38750   'NEUTROPHIL'
S31      72569   'NEUTROPHILS'
S32      72569   R1:R7
? s s32 and s9
           72569  S32
          116251  S9
     S33     532  S32 AND S9
? s s33 and (s14 or s15 or s16 or s17)
             532  S33
             126  S14
               3  S15
              65  S16
             445  S17
     S34       0  S33 AND (S14 OR S15 OR S16 OR S17)
? s s33 and (s10 or s11 or s12 or s13)
             532  S33
             223  S10
            2832  S11
            3845  S12
          104359  S13
     S35      25  S33 AND (S10 OR S11 OR S12 OR S13)
? s s35/2004:2005
              25  S35
         1173584  PY=2004 : PY=2005
     S36       4  S35/2004:2005
? s s35 not s36
              25  S35
               4  S36
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        (c) 2005 Mass. Med. Soc.
  File 467:ExtraMED(tm) 2000/Dec
        (c) 2001 Informania Ltd.
*File 467: F467 no longer updates; see Help News467.                    7.

      Set  Items  Description
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? s lactoferrin?
      S1   32474  LACTOFERRIN?
? s lacto-ferrin?
      S2       0  LACTO-FERRIN?
? s asca?
      S3   57836  ASCA?
? s anca?
      S4   16384  ANCA?
? s s1 and s3 and s4
           32474  S1
           57836  S3
           16384  S4
      S5       5  S1 AND S3 AND S4
? rd
      S6       4  RD  (unique items)
? t s6/6/all

 6/6/1     (Item 1 from file: 5)
0015550582   BIOSIS NO.: 200510245082
The detection of  lactoferrin ,  ASCA , and  ANCA  in feces is useful for
  assessing pediatric IBD patients
2004


 6/6/2     (Item 1 from file: 34)
14147249   Genuine Article#: 919LK   Number of References: 0
Title: Measurement of fecal  lactoferrin , anti-saccharomyces cerevisiae
    antibody ( ASCA ) and anti-neutrophil cytoplasmic antigen antibody (
    ANCA ) in non-IBD patients and healthy control subjects
Publication date: 20050400


 6/6/3     (Item 2 from file: 34)
10437397   Genuine Article#: 527PB   Number of References: 41
Title: Antineutrophil cytoplasmic antibodies, anti-Saccharomyces cerevisiae
    antibodies, and specific IgE to food allergens in children with
    inflammatory bowel diseases  (ABSTRACT AVAILABLE)
Publication date: 20020200


 6/6/4     (Item 1 from file: 73)
13040282     EMBASE No: 2005102251
  Non-invasive markers of inflammatory bowel disease (IBD) in children
  NIET-INVASIEVE MARKERS BIJ INFLAMMATOIRE DARMZIEKTEN OP DE KINDERLEEFTIJD
  2005
? t s6/9/all

 6/9/1     (Item 1 from file: 5)
DIALOG(R)File   5:Biosis Previews(R)
(c) 2005 BIOSIS. All rts. reserv.

0015550582   BIOSIS NO.: 200510245082
The detection of  lactoferrin ,  ASCA , and  ANCA  in feces is useful for
```

assessing pediatric IBD patients
AUTHOR: Boone James H (Reprint); Whitlock Darcy A; Sisco Daniel F; Walker Thomas R; Rufo Paul A
AUTHOR ADDRESS: TechLab Inc, Blacksburg, VA USA**USA
JOURNAL: American Journal of Gastroenterology 99 (10, Suppl. S): pS316 OCT 2004 2004
CONFERENCE/MEETING: 69th Annual Meeting of the American-College-of-Gastroenterology Orlando, FL, USA October 29 -November 03, 2004; 20041029
SPONSOR: Amer Coll Gastroenterol
ISSN: 0002-9270
DOCUMENT TYPE: Meeting; Meeting Abstract
RECORD TYPE: Citation
LANGUAGE: English
DESCRIPTORS:
MAJOR CONCEPTS: Gastroenterology--Human Medicine, Medical Sciences
BIOSYSTEMATIC NAMES: Hominidae--Primates, Mammalia, Vertebrata, Chordata, Animalia
ORGANISMS: human (Hominidae)--child, adolescent, female, male, patient
ORGANISMS: PARTS ETC: serum--blood and lymphatics; feces--digestive system
COMMON TAXONOMIC TERMS: Animals; Chordates; Humans; Mammals; Primates; Vertebrates
DISEASES: inflammatory bowel disease {IBD}--digestive system disease; Crohn's disease--digestive system disease, immune system disease; irritable bowel syndrome--digestive system disease; ulcerative colitis --digestive system disease
MESH TERMS: Inflammatory Bowel Diseases (MeSH); Colonic Diseases, Functional (MeSH); Colitis, Ulcerative (MeSH)
CHEMICALS & BIOCHEMICALS: **lactoferrin** --marker; anti-neutrophil cytoplasmic antibody { **ANCA** }--marker; anti-Saccharomyces cerevisiae antibody { **ASCA** }--marker
METHODS & EQUIPMENT: ELISA--laboratory techniques, immunologic techniques
CONCEPT CODES:
00520 General biology - Symposia, transactions and proceedings
10064 Biochemistry studies - Proteins, peptides and amino acids
14004 Digestive system - Physiology and biochemistry
14006 Digestive system - Pathology
15002 Blood - Blood and lymph studies
15004 Blood - Blood cell studies
25000 Pediatrics
34508 Immunology - Immunopathology, tissue immunology
BIOSYSTEMATIC CODES:
86215 Hominidae

6/9/2 (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

14147249 Genuine Article#: 919LK Number of References: 0
Title: Measurement of fecal lactoferrin , anti-saccharomyces cerevisiae antibody (ASCA) and anti-neutrophil cytoplasmic antigen antibody (ANCA) in non-IBD patients and healthy control subjects
Author(s): Boone JH; Whitlock DA; Lyerly DM
Journal: GASTROENTEROLOGY, 2005, V128, N4,2 (APR), PA304-A304
ISSN: 0016-5085 Publication date: 20050400
Publisher: W B SAUNDERS CO, INDEPENDENCE SQUARE WEST CURTIS CENTER, STE 300, PHILADELPHIA, PA 19106-3399 USA
Language: English Document Type: MEETING ABSTRACT

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DUBINSKY MC, 2001, V96, P758, AM J GASTROENTEROL
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6/9/4 (Item 1 from file: 73)

DIALOG(R)File 73:EMBASE

13040282 EMBASE No: 2005102251

Non-invasive markers of inflammatory bowel disease (IBD) in children

NIET-INVASIEVE MARKERS BIJ INFLAMMATOIRE DARMZIEKTEN OP DE KINDERLEEFTIJD

Damen G.M.; Nieuwenhuis E.E.S.
G.M. Damen, Subafdeling Kindergastro-Enterologie, Erasmus MC-Sophia Kinderziekenhuis, Postbus 2060, 3000 CB Rotterdam Netherlands
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Tijdschrift voor Kindergeneeskunde (TIJDSCHR. KINDERGENEESKD.) (Netherlands) 2005, 73/1 (17-21)
CODEN: TIKID ISSN: 0376-7442
DOCUMENT TYPE: Journal ; Article
LANGUAGE: DUTCH SUMMARY LANGUAGE: ENGLISH; DUTCH
NUMBER OF REFERENCES: 24

Non-invasive markers of inflammation in blood or stool samples may be of help in children suspected of inflammatory bowel disease (IBD). Positive results will support the need for more invasive investigations, while some

markers are of value in determining the type of IBD, as well as disease activity. Anemia and thrombocytosis are general indicators of IBD. Elevated erythrocyte sedimentation rate is often found in active Crohn's disease. In IBD colitis, **ASCA** and p- **ANCA** can be used in order to categorise the disease as either Crohn's disease or ulcerative colitis. The presence of these antibodies seems to be related to age of presentation, localisation of disease, results of treatment and outcome. Fecal alpha-1-antitrypsin is mainly increased in Crohn's disease, but is not clearly related to disease activity. Determination of fecal calprotectin in IBD seems to be more reliable, though in adults fecal calprotectin levels may be increased in colorectal carcinoma and NSAID-induced enteropathy. Fecal **lactoferrin** does not discriminate between Crohn's disease and ulcerative colitis, but is related to disease activity.

DRUG DESCRIPTORS:
neutrophil cytoplasmic antibody--endogenous compound--ec; alpha 1 antitrypsin--endogenous compound--ec; calprotectin--endogenous compound--ec ; nonsteroid antiinflammatory agent--adverse drug reaction--ae
MEDICAL DESCRIPTORS:
*Crohn disease--diagnosis--di; *ulcerative colitis--diagnosis--di; * enteritis--diagnosis--di
disease marker; non invasive measurement; blood analysis; feces analysis; diagnostic value; anemia; thrombocytosis; erythrocyte sedimentation rate; antibody detection; disease activity; colorectal carcinoma; enteropathy --side effect--si; human; child; article
CAS REGISTRY NO.: 9041-92-3 (alpha 1 antitrypsin)
SECTION HEADINGS:
  007 Pediatrics and Pediatric Surgery
  037 Drug Literature Index
  038 Adverse Reaction Titles
  048 Gastroenterology
? logoff hold
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            $0.19   0.055 DialUnits File155
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     $0.15 Estimated cost File35
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     $4.24 Estimated cost File73
            $0.16   0.037 DialUnits File91
     $0.16 Estimated cost File91
            $0.19   0.055 DialUnits File94

Journal Subject Category: GASTROENTEROLOGY & HEPATOLOGY

6/9/3 (Item 2 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

10437397 Genuine Article#: 527PB Number of References: 41
Title: Antineutrophil cytoplasmic antibodies, anti-Saccharomyces cerevisiae antibodies, and specific IgE to food allergens in children with inflammatory bowel diseases
Author(s): Bartunkova J (REPRINT) ; Kolarova I; Sediva A; Holzelova E
Corporate Source: Charles Univ,Univ Hosp Motol, Fac Med 2, Inst Immunol,Prague//Czech Republic/ (REPRINT); Charles Univ,Univ Hosp Motol , Fac Med 2, Inst Immunol,Prague//Czech Republic/
Journal: CLINICAL IMMUNOLOGY, 2002, V102, N2 (FEB), P162-168
ISSN: 1521-6616 Publication date: 20020200
Publisher: ACADEMIC PRESS INC, 525 B ST, STE 1900, SAN DIEGO, CA 92101-4495 USA
Language: English Document Type: ARTICLE
Geographic Location: Czech Republic
Journal Subject Category: IMMUNOLOGY
Abstract: Differential diagnosis between ulcerative colitis (UC) and Crohn's disease (CD) is difficult in the initial phases in pediatric patients with inflammatory bowel diseases (IBD). This study was performed to determine the significance of anti-neutrophil cytoplasmic antibodies (**ANCA**) and anti-Saccharomyces cerevisiae antibodies (**ASCA**) in IBD. **ANCA** were specified with regard to their antigenic specifity, significance to the diagnosis, and correlation of titer with the disease activity. The occurrence of food allergy was questioned, too. Serum samples from 44 children with UC (n = 23) or CD (n = 21) and from disease-control children (coeliac disease, n = 21) were analyzed for IgG **ANCA** , **ANCA** target antigens, IgA and IgG **ASCA** , and IgE to food allergens. Results show that **ANCA** occur more frequently in UC than in CD and disease-control (74, 24, and 10%, respectively). The presence of **ANCA** does not reflect disease activity. Antigenic specificity does not differ in any group. IgA- **ASCA** are found more often in patients with CD (76% versus 17% in UC). The testing for both **ANCA** and **ASCA** enabled clear-cut differential diagnosis between UC and CD based on the high specificity (**ANCA** (+) **ASCA** (-) 92.5% for UC, **ANCA** (-) **ASCA** (+) 93.2% for CD). Specific IgE to food allergens were found in 8.7, 14.3, and 23.8% of patients with UC, CD, and coeliac disease, respectively. We conclude that combined testing of **ANCA** and **ASCA** represents a valuable tool in the differential diagnosis between UC and CD in pediatric patients, minimizing invasive diagnostic procedures. Monitoring of **ANCA** , its specificity, and titer determination does not bring more information. Testing for specific IgE to food allergens may be considered in individual patients. (C) 2002 Elsevier Science (USA).
Descriptors--Author Keywords: anti-neutrophil cytoplasmic antibodies ; anti-Saccharomyces cerevisiae antibodies ; food allergy ; inflammatory bowel diseases ; children
Identifiers--KeyWord Plus(R): PRIMARY SCLEROSING CHOLANGITIS; RESIDENT INTESTINAL FLORA; CROHNS-DISEASE; ULCERATIVE-COLITIS; **LACTOFERRIN** ANTIBODIES; SYSTEMIC VASCULITIS; DIAGNOSTIC ROLE; CROSS-LINKING; **ANCA**; AUTOANTIBODIES
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BARTUNKOVA J, 1997, V17, P455, J CLIN IMMUNOL

13315736 PMID: 10092161

Clinical and biological characteristics of immunopathological disease-related erythema nodosum in children.

Picco P; Gattorno M; Vignola S; Barabino A; Marazzi M G; Bondi E; Pistoia V; Buoncompagni A

2nd Division of Pediatrics, G Gaslini Scientific Institute, Genoa, Italy.

Scandinavian journal of rheumatology (NORWAY) 1999, 28 (1) p27-32, ISSN 0300-9742 Journal Code: 0321213

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: INDEX MEDICUS

We report a series of 22 children with idiopathic, drug unrelated erythema nodosum (EN) admitted to our Department. In 5 of them an history of streptococcal pharyngitis was referred; the remaining patients came to us with a diagnosis of "EN of unknown origin". Acute phase reactants, immunoglobulins, **stool** alpha1 antitrypsin, ANA, anti dsDNA antibodies and **ANCA** assay, chest roentgenogram, tuberculin test, and ophthalmologic assessment were performed in all patients. Etiologic diagnosis was made in 16 patients: Streptococcal pharyngitis (5 cases), chronic inflammatory bowel disease, IBD (3 cases), Behcet syndrome (2 cases), Yersinia enteritis (2 cases), infectious mononucleosis, atypical mycobacterial infection, immunodeficiency related infection, and SLE-like syndrome due to C4 deficiency (1 case each).We found oral/scrotal aphthae in 3 cases, gastrointestinal symptoms in 5 cases, arthritis in 3 cases. Acute phase reactants were positive in 16 patients without correlation to the underlying disease. Conversely, the increased alpha1 antitrypsin **stool** excretion and IgA serum concentration seemed to represent helpful indicators of IBD and Behcet syndrome, respectively. Proinflammatory cytokine pattern showed increased IL6 serum concentrations both in infectious and in non infectious disease-related EN, whereas a minor involvement of TNF was found in these patients.

Tags: Female; Male

Descriptors: *Erythema Nodosum--immunology--IM; *Erythema Nodosum --pathology--PA; Adolescent; Arthritis, Infectious--complications--CO; Arthritis, Infectious--immunology--IM; Behcet Syndrome--complications--CO; Behcet Syndrome--immunology--IM; Child; Child, Preschool; Erythema Nodosum --etiology--ET; Humans; Inflammatory Bowel Diseases--complications--CO; Inflammatory Bowel Diseases--immunology--IM; Interleukin-6--immunology--IM ; Pharyngitis--immunology--IM; Pharyngitis--microbiology--MI; Streptococca l Infections--complications--CO; Streptococcal Infections--immunology--IM; Tumor Necrosis Factor-alpha--immunology--IM

CAS Registry No.: 0 (Interleukin-6); 0 (Tumo

10190430 PMID: 8503382

Ulcerative colitis and antineutrophil cytoplasmic antibodies in Hong Kong Chinese.

Sung J Y; Chan K L; Hsu R; Liew C T; Lawton J W

Department of Medicine, Prince of Wales Hospital, Chinese University of Hong Kong.

American journal of gastroenterology (UNITED STATES) Jun 1993, 88 (6) p864-9, ISSN 0002-9270 Journal Code: 0421030

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: INDEX MEDICUS

Inflammatory bowel diseases are known to be rare among the Chinese. The diagnosis of ulcerative colitis has been difficult in some of the Asian countries where infective colitis is more prevalent. Twenty-three Hong Kong Chinese patients diagnosed to have ulcerative colitis were reviewed. The symptoms were relatively mild and extraintestinal manifestation had been rare. Patients responded well to steroid therapy and sulfasalazine. Three patients in this series were found to have cyst and/or trophozoites of Entamoeba histolytica in stool . In this series, 19 patients were tested for antineutrophil cytoplasmic antibody (**ANCA**). Fourteen patients (73.5%) were positive, of which six (31.5%) showed a perinuclear staining pattern and eight (42%) demonstrated a cytoplasmic pattern. Five patients (26.5%) were negative for any **ANCA** , and none was positive for both. Sera of these patients were also tested for anti-alpha granules, anti-myeloperoxidase, and anti-lactoferrin activities. None was positive. Control sera collected from 16 patients with irritable bowel syndrome were all negative for the tests. In conclusion, testing of ANCAs may help in making the diagnosis of idiopathic inflammatory bowel disease in difficult situations.

Tags: Female; Male

Descriptors: *Autoantibodies--analysis--AN; *Biological Markers--analysis --AN; *Colitis, Ulcerative--ethnology--EH; *Immunoglobulin G--analysis--AN ; Adult; Antibodies, Antineutrophil Cytoplasmic; Colitis, Ulcerative --diagnosis--DI; Diagnosis, Differential; Dysentery, Amebic--diagnosis--DI; Dysentery, Amebic--ethnology--EH; Enzyme-Linked Immunosorbent Assay; Fluorescent Antibody Technique; Follow-Up Studies; Hong Kong--epidemiology --EP; Humans; Incidence

CAS Registry No.: 0 (Antibodies, Antineutrophil Cytoplasmic); 0 (Autoantibodies); 0 (Biological Markers); 0 (Immunoglobulin G)

Record Date Created: 19930701

Record Date Completed: 19930701

09045031 PMID: 1973331

Antineutrophil cytoplasmic autoantibodies and associated diseases: a review.

Jennette J C; Falk R J

Department of Pathology, University of North Carolina, Chapel Hill.

American journal of kidney diseases - the official journal of the National Kidney Foundation (UNITED STATES) Jun 1990, 15 (6) p517-29, ISSN 0272-6386 Journal Code: 8110075

Contract/Grant No.: DK 40208; DK; NIDDK

Publishing Model Print

Document type: Journal Article; Review; Review, Tutorial

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: 'INDEX MEDICUS

Antineutrophil cytoplasmic autoantibodies (**ANCA**) are specific for constituents of neutrophil primary granules and monocyte lysosomes. There are different types of **ANCA** with different specificities. By indirect immunofluorescence microscopy using alcohol-fixed neutrophils as substrate, two major categories of **ANCA** can be recognized, one with cytoplasmic staining (C- **ANCA**) and the other with artifactual perinuclear staining (P- **ANCA**). Some C- **ANCA** have specificity for proteinase 3 (PR3- **ANCA**) and some P- **ANCA** have specificity for myeloperoxidase (MPO- **ANCA**), but there are additional C- **ANCA** and P- **ANCA** specificities. **ANCA** are found in the blood of patients with necrotizing systemic vasculitis, such as Wegener's granulomatosis and polyarteritis nodosa, and patients with idiopathic crescentic glomerulonephritis. The glomerular lesion in patients with systemic and renal-limited **ANCA** -associated diseases is the same, ie, a pauci-immune necrotizing and crescentic glomerulonephritis. No matter where the vascular lesions of **ANCA** -associated disease are (eg, kidney, lung, gut , muscle, skin), they are characterized by necrotizing inflammation and a paucity of immune deposits. The distribution of disease correlates to a degree with the **ANCA** specificity, although there is substantial overlap. For example, patients with Wegener's granulomatosis most often have C- **ANCA** and patients with renal-limited disease most often have P- **ANCA** . In patients with P- **ANCA** -associated glomerulonephritis, approximately 90% of the P- **ANCA** have specificity for MPO. The clinical manifestations of **ANCA** -associated diseases often begin following a flu-like illness. The onset is most often in the winter and least often in the summer. The renal disease usually presents as rapidly progressive renal failure with nephritis. One of the most life-threatening components of the systemic involvement is pulmonary hemorrhage caused by a necrotizing alveolar capillaritis. Intravenous cyclophosphamide plus steroids is as effective as oral cyclophosphamide plus steroids for controlling **ANCA** -associated diseases. Using life-table analysis, the 2-year patient and renal survival rate in both patients with renal-limited and systemic disease is greater than 70%. There is evidence that in addition to being a useful serologic marker, **ANCA** are directly involved in the pathogenesis of the vascular injury in patients with **ANCA** -associated diseases. Although **ANCA** antigens are normally in the cytoplasm of neutrophils and monocytes, priming of these cells, as occurs following exposure to certain cytokines, results in the release of small amounts of **ANCA** antigens at the cell surface. In vitro, **ANCA** -IgG causes cytokine-primed neutrophils to undergo a respiratory burst and degranulation.(ABSTRACT TRUNCATED AT 400 WORDS) (52 Refs.)

Tags: Research Support, Non-U.S. Gov't; Research Support, U.S. Gov't, P.H.S.

Descriptors: *Autoantibodies--isolation and purification--IP; *Glomerulonephritis--immunology--IM; *Neutrophils--immunology--IM; Algorithms; Cytoplasm--immunology--IM; Diagnosis, Differential; Fluorescent

Antibody Technique; Glomerulonephritis--diagnosis--DI; Humans; Immunoenzyme Techniques; Polyarteritis Nodosa--immunology--IM; Wegener's Granulomatosis --immunology--IM

CAS Registry No.: 0 (Autoantibodies)

Record Date Created: 19900813

Record Date Completed: 19900813

14091090 PMID: 11866274

Lactoferrin in whole gut lavage fluid as a marker for disease activity in inflammatory bowel disease: comparison with other neutrophil-derived proteins.

Kayazawa Masanobu; Saitoh Osamu; Kojima Keishi; Nakagawa Ken; Tanaka Seigou; Tabata Kazue; Matsuse Ryoichi; Uchida Kazuo; Hoshimoto Masahiro; Hirata Ichiro; Katsu Ken-ichi

Second Department of Internal Medicine, Osaka Medical College, Takatsuki, Japan.

American journal of gastroenterology (United States) Feb 2002, 97 (2) p360-9, ISSN 0002-9270 Journal Code: 0421030

Publishing Model Print

Document type: Clinical Trial; Controlled Clinical Trial; Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: INDEX MEDICUS

OBJECTIVES: We investigated which neutrophil-derived proteins in whole gut lavage fluid (WGLF) most accurately reflect disease activity in inflammatory bowel disease. METHODS: WGLF was obtained from patients undergoing whole gut lavage as a bowel preparation for colonoscopy. Twenty-seven patients with ulcerative colitis (UC), 23 patients with Crohn's disease (CD), and 35 control subjects were examined. The concentrations of lactoferrin, polymorphonuclear neutrophil elastase (PMN-E), myeloperoxidase, and lysozyme in WGLF were measured by ELISA. For the assessment of stability, WGLF samples were stored at 37 degrees C for various periods. RESULTS: In UC, the concentrations of lactoferrin, myeloperoxidase, and lysozyme in WGLF had good correlations with colonoscopic grading. Zero, 12, five, and 10 of 28 samples from active UC patients showed normal concentrations of lactoferrin, PMN-E, myeloperoxidase, and lysozyme, respectively. In CD, the concentrations of lactoferrin and myeloperoxidase had good correlations with the Crohn's disease activity index. Thirteen and seven of 36 samples from inactive CD patients (Crohn's disease activity index < or = 150) showed high concentrations of lactoferrin and myeloperoxidase, respectively. Most of them (11/13, 6/7) were found to have ulceration by colonoscopy or small bowel x-ray. The ratio of the lactoferrin concentration in the WGLF supernatant to that in total WGLF was highest among these proteins in all disease groups and control subjects. Lactoferrin and myeloperoxidase showed good stability in WGLF, whereas PMN-E and lysozyme did not. CONCLUSION: Lactoferrin is the most suitable of these proteins for use as a neutrophil-derived WGLF marker of intestinal inflammation.

Tags: Comparative Study; Female; Male; Research Support, Non-U.S. Gov't

Descriptors: *Inflammatory Bowel Diseases--pathology--PA; *Lactoferrin --analysis--AN; *Leukocyte Elastase--analysis--AN; *Muramidase--analysis --AN; *Peroxidase--analysis--AN; Adult; **Biological Markers** --analysis--AN; Colonoscopy; Enzyme-Linked Immunosorbent Assay; Humans; Middle Aged; **Neutrophils** ; Peritoneal Lavage; Prognosis; Reference Values; Sensitivity and Specificity; Severity of Illness Index

CAS Registry No.: 0 (Biological Markers); 0 (Lactoferrin

14842756 PMID: 12818275

Fecal lactoferrin is a sensitive and specific marker in identifying intestinal inflammation.

Kane Sunanda V; Sandborn William J; Rufo Paul A; Zholudev Anna; Boone James; Lyerly David; Camilleri Michael; Hanauer Stephen B

University of Chicago, Chicago, Illinois 60637, USA.

American journal of gastroenterology (United States) Jun 2003, 98 (6) p1309-14, ISSN 0002-9270 Journal Code: 0421030

Publishing Model Print

Document type: Evaluation Studies; Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: INDEX MEDICUS

OBJECTIVE: Lactoferrin is a glycoprotein expressed by activated **neutrophils** . The aim of this study was to determine the sensitivity and specificity of **fecal** lactoferrin concentrations for inflammatory bowel disease (IBD) or irritable bowel syndrome (IBS) versus healthy controls. METHODS: Fresh **stool** samples were collected from outpatients with ulcerative colitis (UC), Crohn's disease (CD), or IBS. Clinical disease activity for IBD was assessed using a modified Harvey-Bradshaw Activity Index. **Fecal** lactoferrin concentrations were determined using a polyclonal antibody-based enzyme linked immunoassay. Mean **fecal** lactoferrin concentrations for each group and sensitivity and specificity of the assay were determined. RESULTS: One hundred-four CD patients, 80 UC patients, 31 IBS patients, and 56 healthy controls were recruited. The mean +/- SE **fecal** lactoferrin concentration (microg/g **fecal** weight) was 440 +/- 128 for CD patients, 1125 +/- 498 for UC patients, 1.27 +/- 0.29 for IBS patients, and 1.45 +/- 0.4 for healthy controls. **Fecal** lactoferrin was 90% specific for identifying inflammation in patients with active IBD. Elevated **fecal** lactoferrin was 100% specific in ruling out IBS. CONCLUSIONS: **Fecal** lactoferrin is sensitive and specific for detecting inflammation in chronic IBD. This noninvasive test may prove useful in screening for inflammation in patients presenting with abdominal pain and diarrhea.

Tags: Comparative Study; Female; Male

Descriptors: ***Biological Markers** --analysis--AN; *Colonic Diseases, Functional--metabolism--ME; * **Feces** --chemistry--CH; *Inflammatory Bowel Diseases--metabolism--ME; *Lactoferrin--metabolism--ME; Adolescent; Adult; Aged; Child; Enzyme-Linked Immunosorbent Assay; Humans; Lactoferrin --analysis--AN; Middle Aged; Sensitivity and Specificity; Severity of Illness Index

CAS Registry No.: 0 (Biological Markers); 0 (Lactoferrin)

Record Date Created: 20030623

Record Date Completed: 20030805

14705821 PMID: 12648319

Faecal lactoferrin as a predictor of positive faecal culture in south Indian children with acute diarrhoea.

Venkataraman S; Ramakrishna B S; Kang Gagandeep; Rajan D Prasanna; Mathan V I

Department of Gastrointestinal Sciences, Christian Medical College and Hospital, Vellore, India.

Annals of tropical paediatrics (England) Mar 2003, 23 (1) p9-13, ISSN 0272-4936 Journal Code: 8210625

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: INDEX MEDICUS

Faecal lactoferrin, an iron-based glycoprotein found concentrated in secondary granules of **neutrophils** , may serve as a surrogate marker of inflammation in the intestine. We evaluated the usefulness of **faecal** lactoferrin as a predictor of infection with invasive enteropathogens in 262 children with diarrhoea. Lactoferrin at a dilution of 1:50 had the highest sensitivity for detection not only of conventionally cultured invasive enteropathogens but also of all other enteropathogens. Neither individual clinical symptoms nor the identification of **faecal** leucocytes by microscopy significantly predicted isolation of invasive enteropathogens from the faeces of children with diarrhoea. **Faecal** lactoferrin is a simple test which showed promise in predicting which children with diarrhoea are likely to be infected with invasive pathogens and can be incorporated as a screening test before **faecal** cultures are undertaken in this population.

Tags: Female; Male

Descriptors: *Bacterial Infections--diagnosis--DI; *Diarrhea--metabolism --ME; * **Feces** --chemistry--CH; *Lactoferrin--analysis--AN; Acute Disease; **Biological Markers** --analysis--AN; Child; Child, Preschool; Diarrhea --microbiology--MI; Escherichia coli Infections--diagnosis--DI; **Feces** --microbiology--MI; Humans; India; Infant; Leukocytes--metabolism--ME; Predictive Value of Tests; Sensitivity and Specificity

CAS Registry No.: 0 (Biological Markers); 0 (Lactoferrin)

Record Date Created: 20030321

Record Date Completed: 20030424

14741479 PMID: 12693315

[Laboratory diagnosis in inflammatory bowel disease]

Labordiagnostik bei chronisch entzundlichen Darmerkrankungen.

Seibold F

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Therapeutische Umschau. Revue therapeutique (Switzerland) Mar 2003, 60 (3) p133-6, ISSN 0040-5930 Journal Code: 0407224

Publishing Model Print

Document type: Journal Article ; English Abstract

Languages: GERMAN

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: INDEX MEDICUS

The assessment of disease activity in inflammatory bowel disease is done using clinical parameters and various biological disease markers. Classical disease markers including erythrocyte sedimentation rate, acute phase proteins, such as orosomucoid and CRP, leukocyte and platelet counts, play an important role in the monitoring of disease activity. Furthermore, the determination of zinc, iron, ferritin, vitamin B12, and folic acid is important to avoid deficiencies in patients with severe disease or after surgeries. **Stool** cultures are helpful to detect bacterial or parasitic infections mimicking inflammatory bowel disease. The detection of specific antibodies such as pANCA, PAB and **ASCA** is helpful for the differential diagnosis Crohn's disease--ulcerative colitis.

Tags: Comparative Study

Descriptors: *Inflammatory Bowel Diseases--diagnosis--DI; Acute-Phase Proteins--analysis--AN; Blood Sedimentation; Colitis, Ulcerative--diagnosis --DI; Crohn Disease--diagnosis--DI; Diagnosis, Differential; **Feces** --microbiology--MI; **Feces** --parasitology--PS; Ferritin--blood--BL; Folic Acid--blood--BL; Humans; Inflammatory Bowel Diseases--blood--BL; Iron --blood--BL; Leukocyte Count; Platelet Count; Vitamin B 12--blood--BL; Zinc --blood--BL

CAS Registry No.: 0 (Acute-Phase Proteins); 59-30-3 (Folic Acid); 68-19-9 (Vitamin B 12); 7439-89-6 (Iron); 7440-66-6 (Zinc); 9007-73-2 (Ferritin)

Record Date Created: 20030415

Record Date Completed: 20030519

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 >>>http://www.dialog.com/whatsnew/.  You can find news about<<<
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? Help Off Line
* * *
Connecting to ginny portner - Dialog - 228206
Connected to Dialog via SMS00213

?  s fecal? or stool? or excrement? or faecal? or feces?
>>>E:  No valid databases specified

?  b 155 medicine
>>>W:           138 is unauthorized
1 of the specified files is not available
```

[File 155] **MEDLINE(R)** 1950-2006/Dec 06
(c) format only 2006 Dialog. All rights reserved.
**File 155: MEDLINE has temporarily stopped updating with UD=20061206. Please see HELP NEWS154 for details.*

[File 5] **Biosis Previews(R)** 1969-2007/Dec W5
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[File 34] **SciSearch(R) Cited Ref Sci** 1990-2007/Dec W5
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[File 35] **Dissertation Abs Online** 1861-2006/Nov
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[File 45] **EMCare** 2007/Dec W5

[File 65] **Inside Conferences** 1993-2007/Jan 09

[File 71] **ELSEVIER BIOBASE** 1994-2007/Jan W1

[File 73] **EMBASE** 1974-2007/Jan 09

**File 73: Elsevier will not provide an update to Embase on . January 1, 2007.*

[File 91] **MANTIS(TM)** 1880-2006/Jan

[File 94] **JICST-EPlus** 1985-2007/Jan W1

**File 94: UD200609W2 is the last update for 2006. UD200701W1 is the first update for 2007. The file is complete and up to date.*

[File 98] **General Sci Abs** 1984-2006/Dec

[File 135] **NewsRx Weekly Reports** 1995-2007/Dec W5

[File 144] **Pascal** 1973-2006/Dec W1

[File 149] **TGG Health&Wellness DB(SM)** 1976-2007/Dec W4

[File 156] **ToxFile** 1965-2006/Nov W1

**File 156: ToxFile has stopped updating with MEDLINE records. Please see HELP NEWS 154 for details.*

[File 159] **Cancerlit** 1975-2002/Oct

**File 159: Cancerlit is no longer updating. Please see HELP NEWS159.*

[File 162] **Global Health** 1983-2007/Dec

[File 164] **Allied & Complementary Medicine** 1984-2007/Jan

[File 172] **EMBASE Alert** 2007/Jan 09

[File 266] **FEDRIP** 2006/Dec

[File 369] **New Scientist** 1994-2007/Oct W2

[File 370] **Science** 1996-1999/Jul W3

**File 370: This file is closed (no updates). Use File 47 for more current information.*

[File 399] **CA SEARCH(R)** 1967-2007/UD=14603

**File 399: Use is subject to the terms of your user/customer agreement. IPCR/8 classification codes now searchable as IC=. See HELP NEWSIPCR.*

[File 434] **SciSearch(R) Cited Ref Sci** 1974-1989/Dec

[File 444] **New England Journal of Med.** 1985-2007/Dec W4

[File 467] **ExtraMED(tm)** 2000/Dec


```
?  s fecal? or feces? or stool? or excrement?
       170878   FECAL?
       210971   FECES?
       114166   STOOL?
         4945   EXCREMENT?
S1     413425   S FECAL? OR FECES? OR STOOL? OR EXCREMENT?

?  s anca? or asca? or antineutroph?
        18369   ANCA?
        60642   ASCA?
        18776   ANTINEUTROPH?
S2      88105   S ANCA? OR ASCA? OR ANTINEUTROPH?

?  s s1 (25n) s2
       413425   S1
        88105   S2
S3       2523   S S1 (25N) S2

?  s s3/2002:2006
Processing
>>>W:  One or more prefixes are unsupported
  or undefined in one or more files.
Year ranges not supported in one or more files
         2521   S3
     28108166   PY=2002 : PY=2006
```

```
S4          546   S S3/2002:2006

?  s s3 not s4
          2523   S3
           546   S4
S5        1977   S S3 NOT S4

?  s s1 (5n) s2
        413425   S1
         88105   S2
S6         904   S S1 (5N) S2

?  s s6 not s4
           904   S6
           546   S4
S7         723   S S6 NOT S4

?  rd
Processing
S8         537   RD  (UNIQUE ITEMS)

?  s s8 and bowel?
           537   S8
        372198   BOWEL?
S9            8   S S8 AND BOWEL?

?  t s9/free/all
>>>W:  "FREE" is not a valid format name in file(s): 399
```

9/8/1 (Item 1 from file: 155) **Links**
MEDLINE(R)

10012350 **PMID:** 8146628
[Current developments in the diagnosis and therapy of Crohn disease and ulcerative colitis]

Was gibt es Neues in der Diagnostik und Therapie des Morbus Crohn und der Colitis ulcerosa?
Mar 19 1994
Descriptors: *Colitis, Ulcerative--diagnosis--DI; *Colitis, Ulcerative--therapy--TH; *Crohn Disease--diagnosis--DI; *Crohn Disease--therapy--TH ; Blood Chemical Analysis; Combined Modality Therapy; Diagnostic Imaging; English Abstract; Humans; Immunologic Techniques; Laboratory Techniques and Procedures--methods--MT

9/8/2 (Item 2 from file: 155) **Links**
MEDLINE(R)

08696394 **PMID:** 2150011
Control of ascariasis through age-targeted chemotherapy: impact of 6-monthly chemotherapeutic regimens.

1990
Descriptors: *Ascariasis--prevention and control--PC; *Levamisole--therapeutic use--TU ; Adolescent; Adult; Ascariasis--epidemiology--EP; **Ascariasis** --parasitology--PS; Child; Child, Preschool; **Feces**--parasitology--PS ; Humans; Infant; Middle Aged; Myanmar--epidemiology--EP; Parasite Egg Count; Prevalence; Research Support, Non-U.S. Gov't; Rural Population
CAS Registry No.: 14769-73-4 (Levamisole)

9/8/3 (Item 3 from file: 155) **Links**
MEDLINE(R)

08196407 **PMID:** 2793823
Biliary ascariasis.

07600120 EMBASE No: 1999096595

Clinical and biological characteristics of immunopathological disease-related erythema nodosum in children

Picco P.; Gattorno M.; Vignola S.; Barabino A.; Marazzi M.G.; Bondi E.; Pistoia V.; Buoncompagni A.

P. Picco, 2nd Division of Pediatrics, 'G. Gaslini' Scientific Institute, Largo G. Gaslini 5, I-16147 Genoa Italy

Scandinavian Journal of Rheumatology (SCAND. J. RHEUMATOL.) (Norway) 1999, 28/1 (27-32)

CODEN: SJRHA ISSN: 0300-9742

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 23

We report a series of 22 children with idiopathic, drug unrelated erythema nodosum (EN) admitted to our Department. In 5 of them an history of streptococcal pharyngitis was referred; the remaining patients came to us with a diagnosis of 'EN of unknown origin'. Acute phase reactants, immunoglobulins, %%%stool%%% alpha1 antitrypsin, ANA, anti dsDNA antibodies and %%%ANCA%%% assay, chest roentgenogram, tuberculin test, and ophthalmologic assessment were performed in all patients. Etiologic diagnosis was made in 16 patients: Streptococcal pharyngitis (5 cases), chronic inflammatory bowel disease, IBD (3 cases), Behcet syndrome (2 cases), Yersinia enteritis (2 cases), infectious mononucleosis, atypical mycobacterial infection, immunodeficiency related infection, and SLE-like syndrome due to C4 deficiency (1 case each). We found oral/scrotal aphthae in 3 cases, gastrointestinal symptoms in 5 cases, arthritis in 3 cases. Acute phase reactants were positive in 16 patients without correlation to the underlying disease. Conversely, the increased alpha1 antitrypsin %%%stool%%% excretion and IgA serum concentration seemed to represent helpful indicators of IBD and Behcet syndrome, respectively. Proinflammatory cytokine pattern showed increased IL6 serum concentrations both in infectious and in non infectious disease-related EN, whereas a minor involvement of TNF was found in these patients.

```
$%^Dialog;HighlightOn=%%%;HighlightOff=%%%;

Connecting via Winsock to Dialog


Logging in to Dialog

Trying 31060000009998...Open

DIALOG INFORMATION SERVICES
PLEASE LOGON:
 ********
ENTER PASSWORD:
 ********
Welcome to DIALOG

Dialog level 05.15.00D

Last logoff:  04jan07 18:15:38
Logon file405 09jan07 14:56:33
           *** ANNOUNCEMENTS ***
                    ***
NEW FILES RELEASED
***Engineering Index Backfile (File 988)
***Verdict Market Research (File 769)
***EMCare (File 45)
***Trademarkscan - South Korea (File 655)

RESUMED UPDATING
***File 141, Reader's Guide Abstracts
                    ***
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***File 11, PsycInfo
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                                ***
DATABASES REMOVED
***File 196, FINDEX
***File 468, Public Opinion Online (POLL)
Chemical Structure Searching now available in Prous Science Drug
Data Report (F452), Prous Science Drugs of the Future (F453),
IMS R&D Focus (F445/955), Pharmaprojects (F128/928), Beilstein
Facts (F390), Derwent Chemistry Resource (F355) and Index Chemicus
(File 302).
                    ***
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* * *
SYSTEM:HOME
Cost is in DialUnits
Menu System II: D2 version 1.8.0 term=ASCII
                     *** DIALOG HOMEBASE(SM) Main Menu ***

 Information:
  1.  Announcements (new files, reloads, etc.)
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  6.  DIALOG(R) Document Delivery
  7.  Data Star(R)

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      /H = Help           /L = Logoff           /NOMENU = Command Mode
```

```
Enter an option number to view information or to connect to an online
 service.  Enter a BEGIN command plus a file number to search a database
(e.g., B1 for ERIC).
? b 410

       09jan07 14:56:34 User228206 Session D2665.1
            $0.00    0.245 DialUnits FileHomeBase
     $0.00  Estimated cost FileHomeBase
     $0.00  Estimated cost this search
     $0.00  Estimated total session cost   0.245 DialUnits

File 410:Dialog Comm.-of-Interest Newsl/Jul (c) 2006 Dialog

      Set  Items  Description
      ---  -----  -----------
? set hi %%%;set hi %%%
HILIGHT set on as '%%%'%%%
%%%HILIGHT set on as '%%%'
? b 155 medicine patents
>>>         138 is unauthorized
>>>         351 is unauthorized
>>>         352 is unauthorized
>>>3 of the specified files are not available
       09jan07 14:56:42 User228206 Session D2665.2
            $0.00    0.117 DialUnits File410
     $0.00  Estimated cost File410
     $0.03  TELNET
     $0.03  Estimated cost this search
     $0.03  Estimated total session cost   0.362 DialUnits

SYSTEM:OS  - DIALOG OneSearch
  File 155:MEDLINE(R) 1950-2006/Dec 06
        (c) format only 2006 Dialog
*File 155: MEDLINE has temporarily stopped updating with UD=20061206.
Please see HELP NEWS154 for details.
  File   5:Biosis Previews(R) 1969-2007/Dec W5
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  File  35:Dissertation Abs Online 1861-2006/Nov
        (c) 2006 ProQuest Info&Learning
  File  45:EMCare 2007/Dec W5
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*File  73: Elsevier will not provide an update to Embase on
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  File  91:MANTIS(TM) 1880-2006/Jan
        2001 (c) Action Potential
  File  94:JICST-EPlus 1985-2007/Jan W1
        (c)2007 Japan Science and Tech Corp(JST)
*File  94: UD200609W2 is the last update for 2006. UD200701W1 is the
first update for 2007. The file is complete and up to date.
  File  98:General Sci Abs 1984-2006/Dec
        (c) 2006 The HW Wilson Co.
  File 135:NewsRx Weekly Reports 1995-2007/Dec W5
        (c) 2007 NewsRx
  File 144:Pascal 1973-2006/Dec W1
        (c) 2006 INIST/CNRS
  File 149:TGG Health&Wellness DB(SM) 1976-2007/Dec W4
        (c) 2007 The Gale Group
  File 156:ToxFile 1965-2006/Nov W1
        (c) format only 2006 Dialog
*File 156: ToxFile has stopped updating with MEDLINE records. Please
see HELP NEWS 154 for details.
  File 159:Cancerlit 1975-2002/Oct
        (c) format only 2002 Dialog
*File 159: Cancerlit is no longer updating.
```

Please see HELP NEWS159.
  File 162:Global Health 1983-2007/Dec
        (c) 2007 CAB International
  File 164:Allied & Complementary Medicine 1984-2007/Jan
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  File 172:EMBASE Alert 2007/Jan 09
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        (c) 2007 Mass. Med. Soc.
  File 467:ExtraMED(tm) 2000/Dec
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  File 123:CLAIMS(R)/Current Legal Status 1980-2007/Jan 02
        (c) 2007 IFI/CLAIMS
*File 123: Reassignment data is now updated weekly.
  File 324:German Patents Fulltext 1967-200701
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  File 331:Derwent WPI First View   UD=200702 (c) 2007 The Thomson Corp.
*File 331: For patent family information, search also File 351, 352,
or 350.
  File 340:CLAIMS(R)/US Patent 1950-07/Jan 04
        (c) 2007 IFI/CLAIMS(R)
*File 340: The 2006 reload is online as of December 1, 2006.
IPCR/8 is available.
  File 342:Derwent Patents Citation Indx 1978-07/200682
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  File 345:Inpadoc/Fam.& Legal Stat 1968-2006/UD=200701
        (c) 2007 EPO
  File 347:JAPIO Dec 1976-2006/Sep(Updated 061230)
        (c) 2007 JPO & JAPIO
  File 348:EUROPEAN PATENTS 1978-2006/ 200701
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  File 353:Ei EnCompassPat(TM) 1964-200701
        (c) 2007 Elsevier Eng. Info. Inc.
*File 353: Ei EnCompassPat/Ei EnCompassLit combined usage is
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  File 371:French Patents 1961-2002/BOPI 200209
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*File 371: This file is not currently updating. The last update is 200209.
  File 447:IMS Patent Focus 2006/Sep
        (c) 2006 IMS Health & Affiliates
  File 652:US Patents Fulltext 1971-1975
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  File 654:US Pat.Full. 1976-2007/Jan 04
        (c) Format only 2007 Dialog
*File 654: IPCR/8 classification codes now searchable in 2006 records.
For information about IC= index changes, see HELP NEWSIPCR.
  File 670:LitAlert 1973-2007/UD=200615A
        (c) 2007 The Thomson Corp.

```
      Set  Items  Description
      ---  -----  -----------
? e anca

Ref    Items   RT  Index-term
E1     18310    7 *ANCA
E2         1      ANCA A NEW TABLE GRAPE-D CULTIVAR
E3         2      ANCA AND VASCULITIS
E4         5      ANCA ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODIES
E5         5      ANCA ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODY
E6         2      ANCA ANTI-NEUTROPHIL CYTOPLASMIC AUTOANTIBODY
E7         1      ANCA ANTIBODIES
E8         2      ANCA ANTIBODY
E9         1      ANCA ANTIBODY ANTI NEUTROPHIL CYTOPLASMIC ANTI
E10        3      ANCA ANTIGEN
E11        6      ANCA ANTIGENS
E12        4      ANCA ANTINEUTROPHIL CYTOPLASM ANTIBODY

          Enter P or PAGE for more
? s e4-e9 or e12
              5  ANCA ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODIES
              5  ANCA ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODY
              2  ANCA ANTI-NEUTROPHIL CYTOPLASMIC AUTOANTIBODY
              1  ANCA ANTIBODIES
              2  ANCA ANTIBODY
              1  ANCA ANTIBODY ANTI NEUTROPHIL CYTOPLASMIC ANTI
              4  ANCA ANTINEUTROPHIL CYTOPLASM ANTIBODY
      S1     20  E4-E9 OR E12
? s e1
      S2  18310  'ANCA'
? e e1

Ref    Items Type  RT  Index-term
R1      8101        7 *ANCA
R2      3635   X   30  ANTIBODIES, ANTINEUTROPHIL CYTOPLASMIC
R3         1   F    1  ANTINEUTROPHIL CYTOPLASMIC ANTIBODY
R4     13157   B    5  AUTOANTIBODY
R5      3699   U   20  NEUTROPHIL CYTOPLASMIC ANTIBODY
? s r1:r3 or r5
             9450  ANCA:ANTINEUTROPHIL CYTOPLASMIC ANTIBODY
             3699  NEUTROPHIL CYTOPLASMIC ANTIBODY
      S3    11298  R1:R3 OR R5
? e asca

Ref    Items  Index-term
E1         4  ASC/TMS1
E2         1  ASC:SIL RATIO
E3      6284 *ASCA
E4         3  ASCA (ACARINA)
E5         1  ASCA AND RXTE OBSERVATIONS
E6         1  ASCA ANNANDALEI (ACARINA)
E7         1  ASCA ANTI-OMPC
E8         3  ASCA ANTI-SACCHAROMYCES CEREVISIAE ANTIBODIES
E9         7  ASCA ANTI-SACCHAROMYCES CEREVISIAE ANTIBODY
E10        2  ASCA ANTIBODIES
E11        3  ASCA ANTIBODY
E12        2  ASCA ANWENJUI (ACARINA)

          Enter P or PAGE for more
? s e3 or s7 or e8 or e9 or e10 or e11
>>>"S7" does not exist
             6284  ASCA
                0  S7
                3  ASCA ANTI-SACCHAROMYCES CEREVISIAE ANTIBODIES
                7  ASCA ANTI-SACCHAROMYCES CEREVISIAE ANTIBODY
                2  ASCA ANTIBODIES
                3  ASCA ANTIBODY
      S4     6284  'ASCA' OR S7 OR 'ASCA ANTI-SACCHAROMYCES CEREVISIAE
                   ANTIBODIES' OR 'ASCA ANTI-SACCHAROMYCES CEREVISIAE
                   ANTIBODY' OR 'ASCA ANTIBODIES' OR 'ASCA ANTIBODY'
? p
```

```
Ref    Items  Index-term
E13        2  ASCA APHIDIOIDES (ACARINA)
E14        1  ASCA AVIANIDA (ACARINA)
E15        1  ASCA DORSOPOROSA (ACARINA)
E16        1  ASCA GANDAHANA (ACARINA)
E17        1  ASCA GARMANI (ACARINA)
E18        3  ASCA GENE
E19        1  ASCA GROSTALI (ACARINA)
E20        1  ASCA GROSTALI N.SP.
E21        1  ASCA IBASILEONILA (ACARINA)
E22        1  ASCA IDIOBASIS (ACARINA)
E23        1  ASCA IGA
E24        1  ASCA IGA ASCA IMMUNOGLOBULIN A

          Enter P or PAGE for more
? s e23 or e24
               1  ASCA IGA
               1  ASCA IGA ASCA IMMUNOGLOBULIN A
      S5       2  'ASCA IGA' OR 'ASCA IGA ASCA IMMUNOGLOBULIN A'
? p

Ref    Items  Index-term
E25        1  ASCA IGG
E26        1  ASCA IGG ASCA IMMUNOGLOBULIN G
E27        1  ASCA IV
E28        1  ASCA KOSUNGENSIS (ACARINA)
E29        1  ASCA LONGISETA (ACARINA)
E30        1  ASCA MACROMELA (ACARINA)
E31        1  ASCA MACROMELA N.SP.
E32        2  ASCA MEASUREMENTS
E33        1  ASCA MINDANENSIS (ACARINA)
E34        1  ASCA MINDI (ACARINA)
E35        1  ASCA MINDI N.SP.
E36        1  ASCA MUSCICOLA (ACARINA)

          Enter P or PAGE for more
? s e25 or e26 or e27
               1  ASCA IGG
               1  ASCA IGG ASCA IMMUNOGLOBULIN G
               1  ASCA IV
      S6       3  'ASCA IGG' OR 'ASCA IGG ASCA IMMUNOGLOBULIN G' OR 'ASCA
                  IV'
? e panca

Ref    Items  Index-term
E1         1  PANC-89 CELLS
E2         1  PANC-9 CELL LINE (HOMINIDAE)
E3      1720 *PANCA
E4         3  PANCA ANTIBODIES
E5         3  PANCA ANTIBODY
E6         1  PANCA ANTIGEN
E7         1  PANCA ANTIGENS
E8         1  PANCA ANTINEUTROPHIL CYTOPLASMIC ANTIGEN
E9         1  PANCA AUTOANTIBODY
E10        1  PANCA CORE EPITOPE
E11        1  PANCA GENE
E12        2  PANCA IN IBD

          Enter P or PAGE for more
? s e3or e4 or e5
               0  E3OR E4
               3  PANCA ANTIBODY
      S7       3  E3OR E4 OR 'PANCA ANTIBODY'
? s e12 or e9 or e8
               2  PANCA IN IBD
               1  PANCA AUTOANTIBODY
               1  PANCA ANTINEUTROPHIL CYTOPLASMIC ANTIGEN
      S8       4  'PANCA IN IBD' OR 'PANCA AUTOANTIBODY' OR 'PANCA
                  ANTINEUTROPHIL CYTOPLASMIC ANTIGEN'
? p
```

```
Ref    Items  Index-term
E13        1  PANCA MONOCLONAL ANTIBODIES
E14        1  PANCA P-ANTINEUTROPHIL CYTOPLASMIC ANTIBODIES
E15        5  PANCA PERINUCLEAR ANTI-NEUTROPHIL CYTOPLASMIC
E16        4  PANCA PERINUCLEAR ANTINEUTROPHIL CYTOPLASMIC A
E17        1  PANCA PLASMA ANTINEUTROPHIL CYTOPLASMIC ANTIBO
E18        1  PANCA TITER
E19        1  PANCA VASCULITIS
E20        1  PANCA-LIKE
E21        2  PANCA-POSITIVE
E22        1  PANCA-POSITIVE PULMO-RENAL SYNDROME
E23        1  PANCA-REACTIVE FRAGMENT
E24        1  PANCA-RELATED

          Enter P or PAGE for more
? s e13-e18
               1  PANCA MONOCLONAL ANTIBODIES
               1  PANCA P-ANTINEUTROPHIL CYTOPLASMIC ANTIBODIES
               5  PANCA PERINUCLEAR ANTI-NEUTROPHIL CYTOPLASMIC
               4  PANCA PERINUCLEAR ANTINEUTROPHIL CYTOPLASMIC A
               1  PANCA PLASMA ANTINEUTROPHIL CYTOPLASMIC ANTIBO
               1  PANCA TITER
      S9      13  E13-E18
? p

Ref    Items  Index-term
E25        4  PANCAA
E26        1  PANCABHUTA
E27        1  PANCACAKE
E28        4  PANCACEA
E29        1  PANCACES
E30        3  PANCACKED
E31        1  PANCACKES
E32        1  PANCACYL
E33        6  PANCADAS
E34        1  PANCADENA
E35        4  PANCADER
E36        1  PANCADES

          Enter P or PAGE for more
? ds

Set      Items   Description
S1          20   E4-E9 OR E12
S2       18310   'ANCA'
S3       11298   R1:R3 OR R5
S4        6284   'ASCA' OR S7 OR 'ASCA ANTI-SACCHAROMYCES CEREVISIAE ANTIBO-
                 DIES' OR 'ASCA ANTI-SACCHAROMYCES CEREVISIAE ANTIBODY' OR 'AS-
                 CA ANTIBODIES' OR 'ASCA ANTIBODY'
S5           2   'ASCA IGA' OR 'ASCA IGA ASCA IMMUNOGLOBULIN A'
S6           3   'ASCA IGG' OR 'ASCA IGG ASCA IMMUNOGLOBULIN G' OR 'ASCA IV'
S7           3   E3OR E4 OR 'PANCA ANTIBODY'
S8           4   'PANCA IN IBD' OR 'PANCA AUTOANTIBODY' OR 'PANCA ANTINEUTR-
                 OPHIL CYTOPLASMIC ANTIGEN'
S9          13   E13-E18
? s s1 or s2 or s3 or s7 or s8 or s9
              20  S1
           18310  S2
           11298  S3
               3  S7
               4  S8
              13  S9
     S10   21524  S1 OR S2 OR S3 OR S7 OR S8 OR S9
? s s4 or s5 or s6
            6284  S4
               2  S5
               3  S6
     S11    6284  S4 OR S5 OR S6
? s s10 and s11
           21524  S10
            6284  S11
     S12     352  S10 AND S11
```

```
? e feces

Ref    Items    RT  Index-term
E1         1        FECERY
E2         1        FECERZUNGE
E3    232330    38 *FECES
E4         1        FECES --ABNORMALITIES --AB
E5     13507        FECES --ANALYSIS --AN
E6         1        FECES --ANATOMY AND HISTOLOGY --AH
E7      7654        FECES --CHEMISTRY --CH
E8       193        FECES --CYTOLOGY --CY
E9        49        FECES --DRUG EFFECTS --DE
E10      709        FECES --ENZYMOLOGY --EN
E11      299        FECES --IMMUNOLOGY --IM
E12      464        FECES --METABOLISM --ME

          Enter P or PAGE for more
? s e3:e12
     S13  232329  'FECES':'FECES --METABOLISM --ME'
? e e3

Ref    Items Type  RT  Index-term
R1    141520       38 *FECES
R2       627    R    4  DEFECATION
R3      7831    R    3  DIARRHEA
R4      9200    B    7  HUMAN EXCRETA
R5      4230    R    3  INTESTINAL CONTENT
R6     14062    R    5  MANURE
R7      1018    N    2  MECONIUM
R8      1480    R    3  GASTROINTESTINAL CONTENTS
R9       240    R       WASTE SOLIDS,NIGHT SOIL
R10    10409           DC=A12
R11        3    B  276  FLUIDS, EXCRETA AND SECRETIONS
R12        0    S    2  FAECAL EXCRETION

          Enter P or PAGE for more
? p

Ref    Items Type  RT  Index-term
R13     6686    S    2  FAECES
R14        0    S    2  FECAL EXCRETION
R15    15921    S    2  STOOL
R16     6656    S    2  STOOLS
R17    61203    X       DC=A12.459.
R18       43    R    5  DIGESTIVE TRACT CONTENTS
R19     2044    R   10  GASTROINTESTINAL CONTENTS
R20     4478    R    7  MANURE
R21     5193    N    8  MECONIUM
R22     3143    N   15  MELENA
R23      211    N    4  MECONIUM
? p
>>>Related terms display completed...
? s r1:r23
>>>One or more prefixes are unsupported
>>>  or undefined in one or more files.
     S14  203650  R1:R23
? ds

Set     Items  Description
S1         20   E4-E9 OR E12
S2      18310   'ANCA'
S3      11298   R1:R3 OR R5
S4       6284   'ASCA' OR S7 OR 'ASCA ANTI-SACCHAROMYCES CEREVISIAE ANTIBO-
            DIES' OR 'ASCA ANTI-SACCHAROMYCES CEREVISIAE ANTIBODY' OR 'AS-
            CA ANTIBODIES' OR 'ASCA ANTIBODY'
S5          2   'ASCA IGA' OR 'ASCA IGA ASCA IMMUNOGLOBULIN A'
S6          3   'ASCA IGG' OR 'ASCA IGG ASCA IMMUNOGLOBULIN G' OR 'ASCA IV'
S7          3   E3OR E4 OR 'PANCA ANTIBODY'
S8          4   'PANCA IN IBD' OR 'PANCA AUTOANTIBODY' OR 'PANCA ANTINEUTR-
            OPHIL CYTOPLASMIC ANTIGEN'
S9         13   E13-E18
S10     21524   S1 OR S2 OR S3 OR S7 OR S8 OR S9
```

```
S11       6284   S4 OR S5 OR S6
S12        352   S10 AND S11
S13     232329   'FECES':'FECES --METABOLISM --ME'
S14     203650   R1:R23
? s s12 and (s13 or s14)
              352  S12
           232329  S13
           203650  S14
     S15       14  S12 AND (S13 OR S14)
? s s15/2003:2006
>>>One or more prefixes are unsupported
>>>  or undefined in one or more files.
>>>Year ranges not supported in one or more files
Processing
Processed  30 of  42 files ...
Processing
Processed  40 of  42 files ...
Completed processing all files
              14  S15
        36046423  PY=2003 : PY=2006
     S16       14  S15/2003:2006
? t s15/free/all
>>>"FREE" is not a valid format name in file(s): 123, 324, 347-349, 399,
   652, 654

 15/8/1     (Item 1 from file: 155)
DIALOG(R)File 155:(c) format only 2006 Dialog. All rts. reserv.

20902886   PMID: 16385247
  Combined use of noninvasive tests is useful in the initial diagnostic
approach to a child with suspected inflammatory bowel disease.
Jan 2006
  Tags: Female; Male
  Descriptors: %%%*Antibodies, Antineutrophil Cytoplasmic%%%--analysis--AN;
*Antibodies, Fungal--analysis--AN; *Diagnostic Tests, Routine--standards
--ST; *Inflammatory Bowel Diseases--diagnosis--DI; *Leukocyte L1 Antigen
Complex--analysis--AN; Adolescent; Child; Colitis, Ulcerative--diagnosis
--DI; Colitis, Ulcerative--immunology--IM; Colitis, Ulcerative--pathology
--PA; Comparative Study; Crohn Disease--diagnosis--DI; Crohn Disease
--immunology--IM; Crohn Disease--pathology--PA; Diagnosis, Differential;
Diagnostic Tests, Routine--methods--MT; %%%Feces%%%--chemistry--CH; Humans;
Inflammatory Bowel Diseases--immunology--IM; Inflammatory Bowel Diseases
--pathology--PA; Intestine, Small--pathology--PA; Intestine, Small
--physiology--PH; Intestine, Small--ultrasonography--US; Permeability;
Reproducibility of Results; Saccharomyces cerevisiae--immunology--IM;
Sensitivity and Specificity
  CAS Registry No.: 0 (Antibodies, Antineutrophil Cytoplasmic); 0
 (Antibodies, Fungal); 0 (Leukocyte L1 Antigen Complex)


 15/8/2     (Item 1 from file: 5)
0015865142   BIOSIS NO.: 200600210537
Measurement of fecal lactoferrin, anti-saccharomyces cerevisiae antibody (
  %%%ASCA%%%) and anti-neutrophil cytoplasmic antigen antibody (%%%ANCA%%%)
  in non-IBD patients and healthy control subjects
2005


 15/8/3     (Item 2 from file: 5)
0015738641   BIOSIS NO.: 200600084036
Measurement of anti-neutrophil cytoplasmic antibodies (%%%ANCA%%%) in human
  %%%feces%%% as an indicator of ulcerative colitis
2004


 15/8/4     (Item 3 from file: 5)
0015550582   BIOSIS NO.: 200510245082
The detection of lactoferrin, %%%ASCA%%%, and %%%ANCA%%% in %%%feces%%% is
  useful for assessing pediatric IBD patients
2004
```

15/8/5 (Item 1 from file: 34)
DIALOG(R)File 34:(c) 2007 The Thomson Corp. All rts. reserv.

13664156 Genuine Article#: 862GW Number of References: 0
Title: The detection of lactoferrin, %%%ASCA%%%, and %%%ANCA%%% in %%%feces%%% is useful for assessing pediatric IBD patients
Publication date: 20041000
Journal Subject Category: GASTROENTEROLOGY & HEPATOLOGY

15/8/6 (Item 1 from file: 73)
14183289 EMBASE No: 2006589904
Antibodies to I2 predict clinical response to fecal diversion in Crohn's disease
2006

15/8/7 (Item 2 from file: 73)
13040282 EMBASE No: 2005102251
Non-invasive markers of inflammatory bowel disease (IBD) in children
NIET-INVASIEVE MARKERS BIJ INFLAMMATOIRE DARMZIEKTEN OP DE KINDERLEEFTIJD
2005

15/8/8 (Item 3 from file: 73)
12012499 EMBASE No: 2003123364
Laboratory tests in inflammatory bowel disease
LABORDIAGNOSTIK BEI CHRONISCH ENTZUNDLICHEN DARMERKRANKUNGEN
2003

15/8/9 (Item 1 from file: 340)
10630310 2004-0039979
C/INFLAMMATORY BOWEL DISEASE AND IRRITABLE BOWEL SYNDROME IBD-FIRST CHEK DIAGNOSTIC PANEL; FOR THE MEASUREMENT OF TOTAL ENDOGENOUS LACTOFERRIN, ANTI-SACCHAROMYCES CEREVISIAE ANTIBODIES (%%%ASCA%%%) AND ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODIES (%%%ANCA%%%) IN HUMAN %%%FECES%%%; KITS
? t s15/3/9

15/3/9 (Item 1 from file: 340)
DIALOG(R)File 340:CLAIMS(R)/US Patent
(c) 2007 IFI/CLAIMS(R). All rts. reserv.

10630310 2004-0039979
C/INFLAMMATORY BOWEL DISEASE AND IRRITABLE BOWEL SYNDROME IBD-FIRST CHEK DIAGNOSTIC PANEL; FOR THE MEASUREMENT OF TOTAL ENDOGENOUS LACTOFERRIN, ANTI-SACCHAROMYCES CEREVISIAE ANTIBODIES (%%%ASCA%%%) AND ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODIES (%%%ANCA%%%) IN HUMAN %%%FECES%%%; KITS
Inventors: Boone James Hunter (US); Lyerly David Maxwell (US); Wilkins Tracy Dale (US)
Assignee: Unassigned Or Assigned To Individual
Assignee Code: 68000
Probable Assignee (A1): TECHLAB Inc
Attorney, Agent or Firm: JEAN M. DICKMAN;SHOOK, HARDY & BACON L.L.P., One Kansas City Place, 1200 Main Street, Kansas City, MO, 64105-2118, US

	Publication Number	Kind	Date	Application Number	Date
	US 20040137536	A1	20040715	US 2003693377	20031024
Priority Applic:				US 2003693377	20031024
Provisional Applic:				US 60-421395	20021025

? logoff
09jan07 15:03:41 User228206 Session D2665.3
$1.10 0.324 DialUnits File155
$0.00 1 Type(s) in Format 8
$0.00 1 Types
$1.10 Estimated cost File155
$1.55 0.258 DialUnits File5
$0.00 3 Type(s) in Format 6
$0.00 3 Types
$1.55 Estimated cost File5

```
     $1.44  Estimated cost File348
            $0.98    0.206 DialUnits File349
     $0.98  Estimated cost File349
            $0.78    0.048 DialUnits File353
     $0.78  Estimated cost File353
            $0.24    0.048 DialUnits File371
     $0.24  Estimated cost File371
            $0.77    0.044 DialUnits File447
     $0.77  Estimated cost File447
            $0.41    0.055 DialUnits File652
     $0.41  Estimated cost File652
            $1.39    0.236 DialUnits File654
     $1.39  Estimated cost File654
            $1.23    0.037 DialUnits File670
     $1.23  Estimated cost File670
            OneSearch, 42 files,  8.281 DialUnits FileOS
     $1.86  TELNET
    $80.99  Estimated cost this search
    $81.02  Estimated total session cost   8.643 DialUnits
Logoff: level 05.15.00 D  15:03:41



Connecting via Winsock to Dialog


Logging in to Dialog

Trying 31060000009998...Open

DIALOG INFORMATION SERVICES
PLEASE LOGON:
 ********
ENTER PASSWORD:
 ********
Welcome to DIALOG

Dialog level 05.15.00D

Last logoff:  09jan07 15:03:41
Logon file405 09jan07 15:04:38
* * *
SYSTEM:HOME
Cost is in DialUnits
Menu System II: D2 version 1.8.0 term=ASCII
                    *** DIALOG HOMEBASE(SM) Main Menu ***

 Information:
  1.  Announcements (new files, reloads, etc.)
  2.  Database, Rates, & Command Descriptions
  3.  Help in Choosing Databases for Your Topic
  4.  Customer Services (telephone assistance, training, seminars, etc.)
  5.  Product Descriptions

 Connections:
  6.  DIALOG(R) Document Delivery
  7.  Data Star(R)

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     /H = Help            /L = Logoff          /NOMENU = Command Mode


Enter an option number to view information or to connect to an online
 service.  Enter a BEGIN command plus a file number to search a database
(e.g., B1 for ERIC).
? b 410

       09jan07 15:04:38 User228206 Session D2666.1
            $0.00    0.234 DialUnits FileHomeBase
     $0.00  Estimated cost FileHomeBase
     $0.00  Estimated cost this search
```

```
     $0.00  Estimated total session cost   0.234 DialUnits

File 410:Dialog Comm.-of-Interest Newsl/Jul (c) 2006 Dialog

      Set  Items  Description
      ---  -----  -----------
? set hi %%%;set hi %%%
HILIGHT set on as '%%%'%%%
%%%HILIGHT set on as '%%%'
? e feces

Ref   Items  Index-term
E1        1  FEB88
E2        1  FEC
E3        1 *FECES
E4      131  FECHA
E5       19  FECHAS
E6       30  FED
E7        2  FEDBIZOPPS
E8      567  FEDERAL
E9       19  FEDERALLY
E10      12  FEDERATION
E11       1  FEDERER
E12       8  FEDERICO

          Enter P or PAGE for more
? s e3
      S1       1  'FECES'
? e fecal

Ref   Items  Index-term
E1        1  FEB88
E2        1  FEC
E3        0 *FECAL
E4        1  FECES
E5      131  FECHA
E6       19  FECHAS
E7       30  FED
E8        2  FEDBIZOPPS
E9      567  FEDERAL
E10      19  FEDERALLY
E11      12  FEDERATION
E12       1  FEDERER

          Enter P or PAGE for more
? logoff
       09jan07 15:05:08 User228206 Session D2666.2
            $0.00    0.463 DialUnits File410
     $0.00  Estimated cost File410
     $0.26  TELNET
     $0.26  Estimated cost this search
     $0.26  Estimated total session cost   0.697 DialUnits
Logoff: level 05.15.00 D  15:05:08


Connecting via Winsock to Dialog


Logging in to Dialog

Trying 31060000009998...Open

DIALOG INFORMATION SERVICES
PLEASE LOGON:
 ********
ENTER PASSWORD:
 ********
Welcome to DIALOG

Dialog level 05.15.00D
```

```
Last logoff:  09jan07 15:05:08
Logon file405 09jan07 15:05:26
* * *
SYSTEM:HOME
Cost is in DialUnits
Menu System II: D2 version 1.8.0 term=ASCII
                    *** DIALOG HOMEBASE(SM) Main Menu ***

 Information:
  1.  Announcements (new files, reloads, etc.)
  2.  Database, Rates, & Command Descriptions
  3.  Help in Choosing Databases for Your Topic
  4.  Customer Services (telephone assistance, training, seminars, etc.)
  5.  Product Descriptions

 Connections:
  6.  DIALOG(R) Document Delivery
  7.  Data Star(R)

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      /H = Help            /L = Logoff          /NOMENU = Command Mode


Enter an option number to view information or to connect to an online
 service.  Enter a BEGIN command plus a file number to search a database
(e.g., B1 for ERIC).
? b 410

       09jan07 15:05:26 User228206 Session D2667.1
            $0.00    0.234 DialUnits FileHomeBase
     $0.00  Estimated cost FileHomeBase
     $0.00  Estimated cost this search
     $0.00  Estimated total session cost   0.234 DialUnits

File 410:Dialog Comm.-of-Interest Newsl/Jul (c) 2006 Dialog

      Set  Items  Description
      ---  -----  -----------
? set hi %%%;set hi %%%
HILIGHT set on as '%%%'%%%
%%%HILIGHT set on as '%%%'
? b 155 medicine patents
>>>         138 is unauthorized
>>>         351 is unauthorized
>>>         352 is unauthorized
>>>3 of the specified files are not available
       09jan07 15:05:34 User228206 Session D2667.2
            $0.00    0.115 DialUnits File410
     $0.00  Estimated cost File410
     $0.03  TELNET
     $0.03  Estimated cost this search
     $0.03  Estimated total session cost   0.350 DialUnits

SYSTEM:OS  - DIALOG OneSearch
  File 155:MEDLINE(R) 1950-2006/Dec 06
         (c) format only 2006 Dialog
*File 155: MEDLINE has temporarily stopped updating with UD=20061206.
Please see HELP NEWS154 for details.
  File   5:Biosis Previews(R) 1969-2007/Dec W5
         (c) 2007 The Thomson Corporation
  File  34:SciSearch(R) Cited Ref Sci 1990-2007/Dec W5
         (c) 2007 The Thomson Corp
  File  35:Dissertation Abs Online 1861-2006/Nov
         (c) 2006 ProQuest Info&Learning
  File  45:EMCare 2007/Dec W5
         (c) 2007 Elsevier B.V.
  File  65:Inside Conferences 1993-2007/Jan 09
         (c) 2007 BLDSC all rts. reserv.
  File  71:ELSEVIER BIOBASE 1994-2007/Jan W1
         (c) 2007 Elsevier B.V.
  File  73:EMBASE 1974-2007/Jan 09
```

(c) 2007 Elsevier B.V.
*File 73: Elsevier will not provide an update to Embase on January 1, 2007.
File 91:MANTIS(TM) 1880-2006/Jan
(c) 2001 Action Potential
File 94:JICST-EPlus 1985-2007/Jan W1
(c)2007 Japan Science and Tech Corp(JST)
*File 94: UD200609W2 is the last update for 2006. UD200701W1 is the first update for 2007. The file is complete and up to date.
File 98:General Sci Abs 1984-2006/Dec
(c) 2006 The HW Wilson Co.
File 135:NewsRx Weekly Reports 1995-2007/Dec W5
(c) 2007 NewsRx
File 144:Pascal 1973-2006/Dec W1
(c) 2006 INIST/CNRS
File 149:TGG Health&Wellness DB(SM) 1976-2007/Dec W4
(c) 2007 The Gale Group
File 156:ToxFile 1965-2006/Nov W1
(c) format only 2006 Dialog
*File 156: ToxFile has stopped updating with MEDLINE records. Please see HELP NEWS 154 for details.
File 159:Cancerlit 1975-2002/Oct
(c) format only 2002 Dialog
*File 159: Cancerlit is no longer updating.
Please see HELP NEWS159.
File 162:Global Health 1983-2007/Dec
(c) 2007 CAB International
File 164:Allied & Complementary Medicine 1984-2007/Jan
(c) 2007 BLHCIS
File 172:EMBASE Alert 2007/Jan 09
(c) 2007 Elsevier B.V.
File 266:FEDRIP 2006/Dec
Comp & dist by NTIS, Intl Copyright All Rights Res
File 369:New Scientist 1994-2007/Oct W2
(c) 2007 Reed Business Information Ltd.
File 370:Science 1996-1999/Jul W3
(c) 1999 AAAS
*File 370: This file is closed (no updates). Use File 47 for more current information.
File 399:CA SEARCH(R) 1967-2007/UD=14603
(c) 2007 American Chemical Society
*File 399: Use is subject to the terms of your user/customer agreement.
IPCR/8 classification codes now searchable as IC=. See HELP NEWSIPCR.
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
(c) 2006 The Thomson Corp
File 444:New England Journal of Med. 1985-2007/Dec W4
(c) 2007 Mass. Med. Soc.
File 467:ExtraMED(tm) 2000/Dec
(c) 2001 Informania Ltd.
File 123:CLAIMS(R)/Current Legal Status 1980-2007/Jan 02
(c) 2007 IFI/CLAIMS
*File 123: Reassignment data is now updated weekly.
File 324:German Patents Fulltext 1967-200701
(c) 2007 Univentio
*File 324: For important information about IPCR/8 and forthcoming changes to the IC= index, see HELP NEWS IPCR.
File 331:Derwent WPI First View UD=200702 (c) 2007 The Thomson Corp.
*File 331: For patent family information, search also File 351, 352, or 350.
File 340:CLAIMS(R)/US Patent 1950-07/Jan 04
(c) 2007 IFI/CLAIMS(R)
*File 340: The 2006 reload is online as of December 1, 2006.
IPCR/8 is available.
File 342:Derwent Patents Citation Indx 1978-07/200682
(c)2007 The Thomson Corp.
File 344:Chinese Patents Abs Jan 1985-2006/Jan
(c) 2006 European Patent Office
File 345:Inpadoc/Fam.& Legal Stat 1968-2006/UD=200701
(c) 2007 EPO
File 347:JAPIO Dec 1976-2006/Sep(Updated 061230)
(c) 2007 JPO & JAPIO
File 348:EUROPEAN PATENTS 1978-2006/ 200701

```
        (c) 2007 European Patent Office
*File 348: For important information about IPCR/8 and forthcoming
changes to the IC= index, see HELP NEWSIPCR.
  File 349:PCT FULLTEXT 1979-2006/UB=20070104UT=20061228
        (c) 2007 WIPO/Thomson
*File 349: For important information about IPCR/8 and forthcoming
changes to the IC= index, see HELP NEWSIPCR.
  File 353:Ei EnCompassPat(TM) 1964-200701
        (c) 2007 Elsevier Eng. Info. Inc.
*File 353: Ei EnCompassPat/Ei EnCompassLit combined usage is
limited to 2 hrs/yr.
  File 371:French Patents 1961-2002/BOPI 200209
        (c) 2002 INPI.  All rts. reserv.
*File 371: This file is not currently updating. The last update is 200209.
  File 447:IMS Patent Focus 2006/Sep
        (c) 2006 IMS Health & Affiliates
  File 652:US Patents Fulltext 1971-1975
        (c) format only 2002 Dialog
  File 654:US Pat.Full. 1976-2007/Jan 04
        (c) Format only 2007 Dialog
*File 654: IPCR/8 classification codes now searchable in 2006 records.
For information about IC= index changes, see HELP NEWSIPCR.
  File 670:LitAlert 1973-2007/UD=200615A
        (c) 2007 The Thomson Corp.

      Set  Items  Description
      ---  -----  -----------
? e feces

Ref    Items   RT  Index-term
E1         1       FECERY
E2         1       FECERZUNGE
E3    232330   38 *FECES
E4         1       FECES --ABNORMALITIES --AB
E5     13507       FECES --ANALYSIS --AN
E6         1       FECES --ANATOMY AND HISTOLOGY --AH
E7      7654       FECES --CHEMISTRY --CH
E8       193       FECES --CYTOLOGY --CY
E9        49       FECES --DRUG EFFECTS --DE
E10      709       FECES --ENZYMOLOGY --EN
E11      299       FECES --IMMUNOLOGY --IM
E12      464       FECES --METABOLISM --ME

        Enter P or PAGE for more
? s e3:e12
      S1  232329  'FECES':'FECES --METABOLISM --ME'
? e e3

Ref    Items Type  RT  Index-term
R1    141520       38 *FECES
R2       627   R    4  DEFECATION
R3      7831   R    3  DIARRHEA
R4      9200   B    7  HUMAN EXCRETA
R5      4230   R    3  INTESTINAL CONTENT
R6     14062   R    5  MANURE
R7      1018   N    2  MECONIUM
R8      1480   R    3  GASTROINTESTINAL CONTENTS
R9       240   R       WASTE SOLIDS,NIGHT SOIL
R10    10409           DC=A12
R11        3   B  276  FLUIDS, EXCRETA AND SECRETIONS
R12        0   S    2  FAECAL EXCRETION

        Enter P or PAGE for more
? p

Ref    Items Type  RT  Index-term
R13     6686   S    2  FAECES
R14        0   S    2  FECAL EXCRETION
R15    15921   S    2  STOOL
R16     6656   S    2  STOOLS
R17    61203   X       DC=A12.459.
R18       43   R    5  DIGESTIVE TRACT CONTENTS
```

```
R19     2044    R    10  GASTROINTESTINAL CONTENTS
R20     4478    R     7  MANURE
R21     5193    N     8  MECONIUM
R22     3143    N    15  MELENA
R23      211    N     4  MECONIUM
? s r1:r23
>>>One or more prefixes are unsupported
>>>  or undefined in one or more files.
      S2  203650  R1:R23
? ds

Set     Items   Description
S1     232329   'FECES':'FECES --METABOLISM --ME'
S2     203650   R1:R23
? s1 or s2
Processing
Processing
<------User Break------>
u!
? ds

Set     Items   Description
S1     232329   'FECES':'FECES --METABOLISM --ME'
S2     203650   R1:R23
? s (s1 or s2) (100n) anca?
          232329  S1
          203650  S2
           21087  ANCA?
      S3       32  (S1 OR S2) (100N) ANCA?
? rd

>>>Duplicate detection is not supported for File 123.

>>>Duplicate detection is not supported for File 324.

>>>Duplicate detection is not supported for File 331.

>>>Duplicate detection is not supported for File 340.

>>>Duplicate detection is not supported for File 342.

>>>Duplicate detection is not supported for File 344.

>>>Duplicate detection is not supported for File 345.

>>>Duplicate detection is not supported for File 347.

>>>Duplicate detection is not supported for File 348.

>>>Duplicate detection is not supported for File 349.

>>>Duplicate detection is not supported for File 353.

>>>Duplicate detection is not supported for File 371.

>>>Duplicate detection is not supported for File 447.

>>>Duplicate detection is not supported for File 652.

>>>Duplicate detection is not supported for File 654.

>>>Duplicate detection is not supported for File 670.

>>>Records from unsupported files will be retained in the RD set.
      S4      24  RD  (unique items)
? t s4/6/all

 4/6/1     (Item 1 from file: 155)
13536605   PMID: 11818981
  [Ascariasis: comparison of the therapeutic efficacy between paico and
albendazole in children from Huaraz]
  Ascaridiasis: Comparacion de la eficacia terapeutica entre paico y
```

albendazol en ninos de Huaraz.
Jul-Sep 2001

4/6/2 (Item 2 from file: 155)
11975848 PMID: 9805923
[A case of MPO-ANCA-related vasculitis that recurred as gastrointestinal bleeding and presented difficulty in treatment]
Sep 1998

4/6/3 (Item 3 from file: 155)
11531069 PMID: 9365154
Anti-neutrophil cytoplasmic antibodies in inflammatory bowel disease with special attention for IgA-class antibodies.
Oct 1997

4/6/4 (Item 4 from file: 155)
10987250 PMID: 8924660
[Upper digestive tract hemorrhage in the Peruvian Andes: report of 115 cases observed in Huaraz]
Hemorragia digestiva alta en los Andes Peruanos: reporte de 115 casos observados en Huaraz.
May-Aug 1996

4/6/5 (Item 1 from file: 5)
0015738641 BIOSIS NO.: 200600084036
Measurement of anti-neutrophil cytoplasmic antibodies (%%%ANCA%%%) in human %%%feces%%% as an indicator of ulcerative colitis
2004

4/6/6 (Item 2 from file: 5)
0015550582 BIOSIS NO.: 200510245082
The detection of lactoferrin, ASCA, and %%%ANCA%%% in %%%feces%%% is useful for assessing pediatric IBD patients
2004

4/6/7 (Item 1 from file: 73)
13873516 EMBASE No: 2006301985
Wegener's granulomatosis complicated with aphthoid colitis
2006

4/6/8 (Item 2 from file: 73)
13373713 EMBASE No: 2005429530
Churg-Strauss syndrome in a patient receiving pranlukast as treatment for asthma
2005

4/6/9 (Item 3 from file: 73)
13040282 EMBASE No: 2005102251
Non-invasive markers of inflammatory bowel disease (IBD) in children
NIET-INVASIEVE MARKERS BIJ INFLAMMATOIRE DARMZIEKTEN OP DE KINDERLEEFTIJD
2005

4/6/10 (Item 4 from file: 73)
12057585 EMBASE No: 2003168802
A case of cutaneous polyarteritis nodosa
2002

4/6/11 (Item 5 from file: 73)
07600120 EMBASE No: 1999096595
Clinical and biological characteristics of immunopathological disease-related erythema nodosum in children
1999

4/6/12 (Item 6 from file: 73)
06692088 EMBASE No: 1996357023
Malignant pyoderma: A clinical variant of pyoderma gangrenosum
1996

4/6/13 (Item 7 from file: 73)
05413786 EMBASE No: 1993181885
Ulcerative colitis and antineutrophil cytoplasmic antibodies in Hong Kong Chinese
1993

4/6/14 (Item 8 from file: 73)
00276623 EMBASE No: 1975048934
Schistosomiasis and other human parasitoses of Lake Lindu in Central Sulawesi (Celebes), Indonesia
1974

4/6/15 (Item 1 from file: 149)
01743900 SUPPLIER NUMBER: 20180125 (USE FORMAT 7 OR 9 FOR FULL TEXT)
II. Diagnostic procedures in a prospective multicenter study of 167 patients.(Fever of Unknown Origin (FUO))
1997
WORD COUNT: 9823 LINE COUNT: 00842

4/6/16 (Item 2 from file: 149)
01743899 SUPPLIER NUMBER: 20180124 (USE FORMAT 7 OR 9 FOR FULL TEXT)
I. A prospective multicenter study of 167 patients with FUO, using fixed epidemiological entry criteria.(Fever of Unknown Origin (FUO))
1997
WORD COUNT: 6520 LINE COUNT: 00584

4/6/17 (Item 1 from file: 399)

Immunoassay for distinguishing ulcerative colitis from Crohn's disease by detecting the presence of fecal anti-neutrophil cytoplasmic antibodies (ANCA)

4/6/18 (Item 1 from file: 467)
00011746
BALANTIDIASIS HUMANA EN HUARAZ: REPORTE DE CINCO CASOS
1997

4/6/19 (Item 1 from file: 340)
10630310 2004-0039979
C/INFLAMMATORY BOWEL DISEASE AND IRRITABLE BOWEL SYNDROME IBD-FIRST CHEK DIAGNOSTIC PANEL; FOR THE MEASUREMENT OF TOTAL ENDOGENOUS LACTOFERRIN, ANTI-SACCHAROMYCES CEREVISIAE ANTIBODIES (ASCA) AND ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODIES (%%%ANCA%%%) IN HUMAN %%%FECES%%%; KITS

4/6/20 (Item 1 from file: 349)
01116759 **Image available**
INFLAMMATORY BOWEL DISEASE AND IRRITABLE BOWEL SYNDROME IBD-FIRST CHEK DIAGNOSTIC PANEL
EPREUVE DIAGNOSTIQUE POUR LA MALADIE INTESTINALE INFLAMMATOIRE, EN DETECTION PREMIERE, ET LE COLON IRRITABLE
Publication Language: English
Filing Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 12479

Publication Year: 2004

4/6/21 (Item 2 from file: 349)
01101357 **Image available**
METHOD FOR DISTINGUISHING ULCERATIVE COLITIS FROM CROHN'S DISEASE BY DETECTING THE PRESENCE OF FECAL ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODIES (ANCA)
METHODE DESTINEE A DISTINGUER LA RECTO-COLITE HEMORRAGIQUE DE LA MALADIE DE CROHN PAR DETECTION DE LA PRESENCE D'ANTICORPS CYTOPLASMIQUES ANTI-NEUTROPHILES (ANCA) FECAUX
Publication Language: English
Filing Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 4069
Publication Year: 2004

4/6/22 (Item 3 from file: 349)
00356672
ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODY MATERIAL ASSOCIATED WITH ULCERATIVE COLITIS AND RELATED METHODS AND KITS
ANTICORPS CYTOPLASMIQUE ANTI-NEUTROPHILE ASSOCIE A LA RECTOCOLITE HEMORRAGIQUE, PROCEDES ET KITS CORRESPONDANTS
Publication Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 36742
Publication Year: 1996

4/6/23 (Item 1 from file: 654)
0005722540
Derwent Accession: 2004-389709
Inflammatory bowel disease and irritable bowel syndrome IBD-first chek diagnostic panel

Fulltext Word Count: 9394
Number of Claims: 29
Exemplary or Independent Claim Number(s): 1,24,28
Number of Drawing Sheets: 2
Number of Figures: 2

4/6/24 (Item 2 from file: 654)
0005705685
Derwent Accession: 2004-248459
Method for distinguishing ulcerative colitis from crohn's disease by detecting the presence of fecal anti-neutrophil cytoplasmic antibodies (ANCA)

Fulltext Word Count: 3325
Number of Claims: 25
Exemplary or Independent Claim Number(s): 1,11,15,17
Number of Drawing Sheets: 1
Number of Figures: 1
? t s4/9/1 2 3 4 11 13 15 16

4/9/1 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

13536605 PMID: 11818981
[Ascariasis: comparison of the therapeutic efficacy between paico and albendazole in children from Huaraz]
Ascaridiasis: Comparacion de la eficacia terapeutica entre paico y albendazol en ninos de Huaraz.
Lopez De Guimaraes D; Neyra Llanos R S; Romero Acevedo J H
Departamento de Medicina, Hospital Victor Ramos Guardia, Huaraz, Peru.

Angiographical examination of superior mesenteric artery revealed that the bleeding was responsible for the lesion of the small intestine, probably the ileum. In spite of TAE (transarterial embolization) he had recurrence of severe hematochezia three days later. Partial ileotomy was performed and progression of the anemia was stopped. Multiple ulcer was found in the resected ileum. The small arteries in the submucosa at the ulceration showed fibrinoid necrosis of the vessel walls. These findings suggested that ANCA-related vasculitis had relapsed. The patient received methylprednisolone pulse therapy, followed by oral administration of prednisolone after the operation. Both serum levels of creatinine and MPO-ANCA gradually decreased after the initiation of treatment. However, 24 days later, he suddenly manifested severe abdominal pain, and was diagnosed as having perforation of the stomach or duodenum. Due to supportive therapy and reduction of the steroid dose, peritonitis subsided, but symptoms caused by systemic vasculitis developed. Later raised the dose of steroid suppressed the activity of systemic vasculitis. In this case, elevation of the ANCA titer demonstrated recurrence of MPO-ANCA-related vasculitis as gastrointestinal bleeding.

Tags: Male

Descriptors: *Antibodies, Antineutrophil Cytoplasmic--analysis--AN; *Gastrointestinal Hemorrhage--etiology--ET; *Peroxidase--immunology--IM; *Vasculitis--diagnosis--DI; Antibody Specificity; Biological Markers --analysis--AN; English Abstract; Glomerulonephritis--etiology--ET; Humans; Middle Aged; Recurrence; Vasculitis--complications--CO

CAS Registry No.: 0 (Antibodies, Antineutrophil Cytoplasmic); 0 (Biological Markers)

Enzyme No.: EC 1.11.1.7 (Peroxidase)

Record Date Created: 19990210

Record Date Completed: 19990210

4/9/3 (Item 3 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

11531069 PMID: 9365154

Anti-neutrophil cytoplasmic antibodies in inflammatory bowel disease with special attention for IgA-class antibodies.

Gigase P; De Clerck L S; Van Cotthem K A; Bridts C H; Stevens W J; Van Outryve M; Pelckmans P A

University of Antwerp, Belgium.

Digestive diseases and sciences (UNITED STATES) Oct 1997, 42 (10) p2171-4, ISSN 0163-2116--Print Journal Code: 7902782

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: AIM; INDEX MEDICUS

Perinuclear anti-neutrophil cytoplasmic antibodies (P-%%%ANCA%%%) of the IgG class have been reported in inflammatory bowel disease, mainly in ulcerative colitis. Since this disease affects the gastrointestinal tract, we determined whether IgA class %%%ANCA%%% were present in inflammatory bowel disease. We used an indirect immunofluorescence assay for IgG and IgA %%%ANCA%%% testing. Sera from 34 patients with Crohn's disease and 29 patients with ulcerative colitis were collected together with clinical and laboratory data. We found IgA class %%%ANCA%%% of a perinuclear type in 52% of patients with ulcerative colitis and in 9% of Crohn's disease patients. There was a significant association between the presence of IgA %%%ANCA%%% and the occurrence of blood in the %%%feces%%% in the ulcerative colitis group (P = 0.03). IgG %%%ANCA%%% was found in 56% of patients with ulcerative colitis and in 7% of patients with Crohn's disease. Because of partial overlap between IgG and IgA %%%ANCA%%% positivity, the sensitivity of %%%ANCA%%% testing in ulcerative colitis increased from 56% up to 78% by combining IgG and IgA assays. In conclusion, IgA %%%ANCA%%% occurs with a high prevalence in ulcerative colitis. Moreover there is a possible relationship between IgA %%%ANCA%%% and disease activity in ulcerative colitis.

Tags: Female; Male

Descriptors: *Antibodies, Antineutrophil Cytoplasmic--blood--BL; *Immunoglobulin A--blood--BL; *Inflammatory Bowel Diseases--immunology--IM ; Adult; Aged; C-Reactive Protein--analysis--AN; Comparative Study;

Fluorescent Antibody Technique, Indirect; Humans; Middle Aged; Reference Values; Research Support, Non-U.S. Gov't; Sensitivity and Specificity
CAS Registry No.: 0 (Antibodies, Antineutrophil Cytoplasmic); 0 (Immunoglobulin A); 9007-41-4 (C-Reactive Protein)
Record Date Created: 19971128
Record Date Completed: 19971128

4/9/4 (Item 4 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10987250 PMID: 8924660
[Upper digestive tract hemorrhage in the Peruvian Andes: report of 115 cases observed in Huaraz]
Hemorragia digestiva alta en los Andes Peruanos: reporte de 115 casos observados en Huaraz.
Villanueva Palacios J; Lopez de Guimaraes D; Avila Polo F
Departmento de Medicina, Hospital Victor Ramos Guardia de Huaraz-Minsa.
Revista de gastroenterologia del Peru - organo oficial de la Sociedad de Gastroenterologia del Peru (PERU) May-Aug 1996, 16 (2) p99-104, ISSN 1022-5129--Print Journal Code: 9108294
Publishing Model Print
Document type: Journal Article ; English Abstract
Languages: SPANISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed
Subfile: INDEX MEDICUS
One hundred and fifteen patients with upper gastrointestinal bleeding diagnosed, between august 1992 and july 1995, at the "Victor Ramos Guardia" General Hospital in Huaraz (3,100 m.o.s.l.), Ancash, Peru, are here studied to know about epidemiologics and clinical aspects of this condition at high altitude. In all, the patients on upper endoscopy were done and gastric biopsy when it was required. The incidence of upper gastrointestinal bleeding for the population at risk was 9.6/ 10,000 in habitants by year, and the institutional prevalence was 12.3/1,000 hospital discharges. All the patients were native from the sierra of %%%Ancash%%%, 55.7% males, 37.4% older than 60 years at age; mean age 52.2 years (18 = 86), 50.4% admitted ingestion of gastroerosives, 55.7% presented with hematemesis and %%%melena%%%, 34.4% only %%%melena%%%, 41.7% had hemoglobin less than 8g/dl and 66.3% required or blood transfusion. The most frequent causes of upper gastrointestinal bleeding were gastric ulcer (29.6%), gastric cancer (26.1%), duodenal ulcer (17.4%), erosions (6.1%). No cause was detected in 7%. The endoscopy diagnostic certainty was 93%. 84.3% required medical treatment, 15.7% required surgical treatment and the global mortality was 4.3%. Attention is made on the high frequency of gastric ulcer and gastric carcinoma as the source of upper gastro intestinal bleeding, in the Indian population.
Tags: Female; Male
Descriptors: *Gastrointestinal Hemorrhage--epidemiology--EP; Adult; Aged; Aged, 80 and over; Altitude; English Abstract; Gastrointestinal Hemorrhage --etiology--ET; Humans; Middle Aged; Peru--epidemiology--EP; Topography, Medical
Record Date Created: 19961125
Record Date Completed: 19961125

4/9/11 (Item 5 from file: 73)
DIALOG(R)File 73:EMBASE

07600120 EMBASE No: 1999096595
Clinical and biological characteristics of immunopathological disease-related erythema nodosum in children
Picco P.; Gattorno M.; Vignola S.; Barabino A.; Marazzi M.G.; Bondi E.; Pistoia V.; Buoncompagni A.
P. Picco, 2nd Division of Pediatrics, 'G. Gaslini' Scientific Institute, Largo G. Gaslini 5, I-16147 Genoa Italy
Scandinavian Journal of Rheumatology (SCAND. J. RHEUMATOL.) (Norway) 1999, 28/1 (27-32)
CODEN: SJRHA ISSN: 0300-9742
DOCUMENT TYPE: Journal; Article

difficult situations.

DRUG DESCRIPTORS:
lactoferrin; myeloperoxidase; salazosulfapyridine
MEDICAL DESCRIPTORS:
*irritable colon--diagnosis--di; *ulcerative colitis--diagnosis--di; *ulcerative colitis--therapy--th
adult; aged; article; chinese; clinical article; clinical feature; colon biopsy; crohn disease; entamoeba histolytica; enzyme linked immunosorbent assay; female; follow up; hong kong; human; immunofluorescence; male; patient compliance; priority journal; steroid therapy
CAS REGISTRY NO.: 55599-62-7 (lactoferrin); 599-79-1 (salazosulfapyridine)
SECTION HEADINGS:
005 General Pathology and Pathological Anatomy
048 Gastroenterology

4/9/15 (Item 1 from file: 149)
DIALOG(R)File 149:TGG Health&Wellness DB(SM)

01743900 SUPPLIER NUMBER: 20180125 (THIS IS THE FULL TEXT)
II. Diagnostic procedures in a prospective multicenter study of 167 patients.(Fever of Unknown Origin (FUO))
Kleijn, Elizabeth M.H.A. de; Lier, Henk J.J. van; Meer, Jos W.M. van der
Medicine, v76, n6, p401(14)
Nov,
1997
PUBLICATION FORMAT: Magazine/Journal; Refereed ISSN: 0025-7974
LANGUAGE: English RECORD TYPE: Fulltext TARGET AUDIENCE: Professional
WORD COUNT: 9823 LINE COUNT: 00842

TEXT:

Introduction

The diagnostic workup of patients with fever of unknown origin (FUO) remains a challenge despite the variety of diagnostic methods currently available and many studies on the subject (1, 2, 7, 9, 14, 17, 18, 21, 25, 28, 30, 32, 40, 41, 46, 5 1). FUO has been defined by Petersdorf and Beeson (40) as a febrile illness of more than 3 weeks' duration, fever of 38.3 (degrees) C (101 (degrees) F) or higher on at least 3 occasions, and uncertain diagnosis after 1 week of inhospital diagnostic workup. Recently, this definition has been modernized by excluding immunocompromised patients like patients with neutropenia or acquired immunodeficiency syndrome (AIDS) (12).

Because a large number of diseases have been reported to cause FUO, it is difficult to construct algorithms covering the complete spectrum of FUO. Some attempts have been made in the past to outline diagnostic approaches (13, 16, 19, 26, 31, 38, 50); although they are of value, it is impossible to extrapolate these algorithms to the individual patient with FUO. Many relevant questions remain when studying these algorithms. Should one perform all examinations mentioned in the staged protocol in patients without potentially diagnostic clues? What is the diagnostic yield of all these investigations under various circumstances? Which patients are at risk for a life-threatening disease? Is it possible to distinguish patients with benign fevers?

Based on data retrieved in a retrospective analysis of investigations performed in patients with FUO and a questionnaire on diagnostic techniques used in patients with FUO among Dutch internists, we developed a staged diagnostic protocol (9, 10). This protocol was used in a prospective study on FUO performed during a 2-year period in all university hospitals in the Netherlands, reported elsewhere in this journal (11). In this study, all investigations, the indications for these investigations, and the results were registered prospectively to recover their utility under various conditions.

Methods

In all 8 university hospitals in the Netherlands, all immunocompetent patients fulfilling criteria for FUO according to Petersdorf and Beeson (40) were enrolled in this study. By reviewing records of all patients with fever and by checking the records of all patients in whom blood cultures were ordered on internal medicine wards, we tried to prevent unintended selection bias.

After informed consent, patients were included in our FUO protocol,

which consisted of a standardized coded history and a standardized thorough physical examination. A number of additional investigations (Table 1) had to be performed in the first week of examination if an explanatory diagnosis was not established. Much weight was given to the presence or absence of potentially diagnostic clues (PDCs), defined as all localizing signs, symptoms, and abnormalities potentially pointing toward a diagnosis, and the use of these PDCs in the diagnostic process. PDCs derived from history, physical examination, and additional investigations had to be registered in the protocol form. Based on these PDCs a differential diagnosis had to be made by the attending physician and registered in the protocol form. Based on this differential diagnosis, appropriate investigations were ordered to exclude or confirm these diagnoses in patients with PDCs. The indication to perform such investigations, and the entity thus searched for, had to be registered also. In the absence of PDCs and in patients with only misleading PDCs, patients underwent a staged standardized diagnostic protocol (see Table 1). Some tests were done as screening procedures in the absence of specific PDCs, before referral to the university hospital, or as a violation of the protocol by the attending physician. These were coded and studied also. Misleading PDCs are PDCs eventually not leading to the diagnosis. Helpful PDCs are PDCs eventually leading to the diagnosis.

TABLE 1. Diagnostic protocol

Obligatory investigations performed in all patients Sedimentation rate; hemoglobin; mean cellular volume; platelet count; leukocyte count and differential count; serum urea nitrogen; creatinine; sodium; potassium; protein; protein fractions; alkaline phosphatase; aminotransferase; lactate dehydrogenase; creatine phosphokinase; antinuclear antibodies; rheumatoid factors; urinary analysis; %%%feces%%% for occult blood; blood cultures aerobic and anaerobic (n = 3); tuberculin test; urine, %%%feces%%%, and sputum culture when indicated; chest X-ray; ultrasonography of upper abdomen Phase 1 diagnostic protocol in patients without PDCs (n = 5) or with misleading PDCs only (n = 38) Pulse/rectal temperature measurement by observer, fundoscopy by an ophthalmologist; calcium, phosphate, urate, amylase, and TSH/T4; immunoelectrophoresis of serum and urine; CRP; ACE; %%%ANCA%%%, anti-dsDNA; ASO; cryoglobulin; C3, C4, CH50; serology for Cytomegalovirus, Epstein-Barr virus, Mycoplasma, Brucella, Toxoplasma, Borrelia, Coxiella, Treponema, Yersinia; blood cultures incubating > 1 week; blood cultures, gastric fluid, urine cultures for tuberculosis; stools for worms, eggs, cysts; bone marrow puncture and culture for Mycobacteria, Brucella, Yersinia; In-111-IgG scintigraphy; X-Ray of sinus and teeth; ultrasonography of pelvis Phase 2 diagnostic protocol in patients without PDCs (Performed when Phase 1 did not reveal PDCs or diagnosis) Hepatitis B serology; anergy tests; repeated chest X-ray; IgD in serum; liver biopsy and culture for Mycobacteria and other bacteria and fungi; crista biopsy and culture for Mycobacteria, Brucella, and common bacteria; echocardiography; CT of abdomen and chest; X-Ray colon; temporal artery biopsy in patients over 55 years

Abbreviations: TSH = thyroid-stimulating hormone; T4 = thyroxine; CRP = C-reactive peptide; ACE = angiotensin-converting enzyme; ANCA = antineutrophil cytoplasmic autoantibodies; ds-DNA = double-stranded deoxyribonucleic acid; ASO = antistreptolysin O test; C = complement; CH50 = total hemolytic complement; In-111-IgG = indium-111-labeled polyclonal human immunoglobulin G; CT = computed tomography; PDCs = potentially diagnostic clues.

Patients did not have to remain admitted, after inclusion, all investigations of the protocol could be performed on an outpatient basis. The clinical condition of the patient was the major reason for a longer stay in the hospital.

The standardized diagnostic protocol ended 1) when a definite diagnosis was made, 2) when PDCs appeared during the diagnostic process, 3) when empiric treatment was started, or 4) when fever subsided. The final diagnosis was established by the attending physician and the first author. Diagnoses were established by serology, culture and histology preferably, but sometimes by exclusion of other diseases or response to therapy and disease course.

Follow-up was performed by analysis of the records of the patients and by telephone calls with attending physicians and individual patients; the last follow-up was performed in March 1996 for all patients with uncertain or no diagnosis.

In this study, periodic fever was defined as at least 2 episodes of fever, with intervals of at least 48 hours without fever.

Results of investigations were coded as normal or abnormal. Abnormal

tests were subdivided as true positive (directly contributing to the diagnosis), false positive (misleading), or equivocal (abnormal but not providing any convincing evidence or not leading to the cause of FUO). Normal tests were coded as true negative or false negative. Because a gold standard for diagnostic accuracy was not available for many investigations, specificity and sensitivity could only be calculated assuming that negative results were true negative when further investigation or the final diagnosis did not contradict these results. The indications for the investigations were registered and coded also.

Most investigations were performed in each university hospital by the locally standard applied method, because the scale of this study did not allow us to centralize these measurements and investigations. However, all immunoblots for Yersinia enterocolitica were performed by the Department of Medical Microbiology, University Hospital Nijmegen (22, 24, 48). Interpretation of the immunoblot was as follows:

IgA negative and IgG positive for at least 2 bands: infection in the past that was considered equivocal.

IgA positive for at least 1 band and IgG positive for at least 2 bands: recent or persistent infection; this was considered a positive test.

IgA positive for 1 band and IgG positive for 1 band or IgA and IgG weakly positive for 1 or more bands: infection in past or beginning infection, repeat necessary; when unchanged this result was considered equivocal.

All other microbiologic serology was considered positive only when a fourfold elevation of IgG titer was present. When IgM was present but no fourfold elevation could be demonstrated, the test was considered equivocal.

Statistical analysis: Comparisons between groups were performed with the Fisher exact test (for the 2 x 2 tables) and the Mann-Whitney U test. P values of .05 or less were considered significant, NS is an abbreviation for nonsignificant. Logistic regression as applied to select variables that might predict whether a diagnosis would be made or not. Variables admitted in this analysis were most obligatory investigations (sedimentation rate, hemoglobin, mean cellular volume, platelet count, leukocyte and differential count, serum urea nitrogen, creatinine, sodium, potassium, protein, protein fractions, alkaline phosphatase, aminotransferase, lactate dehydrogenase, urinary analysis, antinuclear antibodies, blood cultures, Chest X-ray, and abdominal ultrasound), fever pattern, referral pattern, specific nonspecific history and physical examination, age, sex, and the presence of night sweats. For the 8 university hospitals, 7 dummy variables were introduced. Logistic regression could be applied only to those patients who had "known" values for all admitted variables. In patients with known values for the selected variables, but with missing values for 1 or more of the other admitted variables, it was verified whether the regression equation was valid. We calculated sensitivity and specificity with 95% confidence intervals.

Results

Of 167 patients meeting the criteria for FUO during the 2-year study period, a diagnosis could be made in only 117. In 43 (26%) patients, infections were found; in 21 (13%), neoplasms; in 40 (24%) patients, noninfectious inflammatory diseases (NIID) (11). A total of 10,855 investigations in 167 patients was performed.

Utility of the screening diagnostic protocol

All data on history and physical examination were entered in a database. The most common PDCs (present in more than 10 patients) were the following (number of patients in parentheses): relevant diseases in past (131), relevant operation in past (68), headache (62), myalgia (58), diarrhea (50), vertigo (48), arthralgia (48), changed bowel habits (42), nausea (42), heart murmur (41), pulmonary abnormalities (38), back pain (38), sore throat (37), abdominal complaints (37), dysuria (30), sensory dysfunction (28), arthritis (27), hepatomegaly (26), palpable breast abnormalities (22), contact with tuberculosis (21), visual complaints (21), tropical trip in recent past (21), goiter (20), splenomegaly (17), cold intolerance (17), neurologic abnormalities (17), insect bite (15), jaundice in past (15), dental intervention (15), hearing loss (15), heat intolerance (15), cervical lymphadenopathy (13), buccal aphthae (13), genital infection in past (12), generalized lymphadenopathy (11), and abnormal vaginal discharge (10). Other PDCs were found by various laboratory and imaging investigations in the first week of admission.

After 1 week of admission, PDCs were present in 162 (97%) patients (Table 2, Figure 1). A diagnosis was made in 114 of 162 (70%) patients with PDCs and in 3 of 5 (60%) patients without PDCs (Fisher exact test, NS). In

16 patients without PDCs or with only misleading PDCs, a diagnosis was made (Table 3). Not every patient without PDCs or with only misleading PDCs underwent the complete first phase of the diagnostic protocol. Some investigations were not performed because new PDCs appeared or fever subsided. Forty-three patients completed the first phase; 15 of them also completed the second part. Exact data on the number of investigations performed as a screening procedure in the absence of PDCs can be found in Tables 4 and 5.

TABLE 2. Potentially diagnostic clues(*) (PDCs) in 167 patients with fever of unknown origin

		Patients Without Diagnosis (n = 50)		
	Patients With Diagnosis (n = 117)	Spontaneous Recovery (n = 37)	Persistent Fever (n = 13)	Total
Helpful PDCs only	53			53
Misleading and helpful PDCs	48			48
Misleading PDCs only	13	35	13	61
No PDCs	3	2	0	5

(*) Defined in Methods section.

Utility of investigations in the diagnostic process

Chemical investigations: The obligatory chemical tests (see Table 1) were done in more than 95% of all patients except for serum protein fractions (145 patients), fecal occult blood (109 patients), and creatine phosphokinase (135 patients). None of the chemical investigations revealed the diagnosis, although some contributed somewhat to the diagnosis: in 1 patient with hyponatremia, meningitis proved to be the cause of FUO. In 4 patients with elevated urea, further investigations revealed mixed cryoglobulinemia (n = 2), systemic lupus erythematosus (n = 1), and pyelonephritis with ureteral obstruction (n = 1) as cause of the fever. In 6 patients with abnormal liver chemistry, abnormalities in the liver explaining the FUO were found (localization of malignant lymphoma and Hodgkin lymphoma, cytomegalovirus (n = 2), hepatitis C, and liver metastasis of adenocarcinoma). However, in 50% of our patients with FUO, nonspecific disturbances of liver chemistry were found. Fecal occult blood never was helpful in our patient group and was false positive in 10% of cases. In 1 patient, hypercalcemia led to the diagnosis of bone metastasis of breast cancer. Urate was elevated in 1 patient in whom gout presented as FUO. Creatine phosphokinase was elevated in 2 patients (with relapse polymyositis and dermatomyositis with interstitial lung fibrosis, respectively) and false positive in 1 patient, in whom a dental infection was the cause of FUO. Anemia, present in 127 patients, was normocytic in most patients. In 37 patients mean cellular volume (MCV) was abnormal; none of the 17 patients with microcytic anemia had gastrointestinal abnormalities responsible for the fever.

Immunologic serology (see Table 4): Antinuclear antibodies were helpful in establishing the diagnosis of systemic lupus erythematosus (n = 2), relapse of mixed cryoglobulinemia, and relapse of polymyositis. The presence of rheumatoid factors was helpful in establishing diagnoses for relapse of polymyositis, relapse of mixed cryoglobulinemia, and vasculitis in rheumatoid arthritis. Immuno-electrophoresis of the serum was helpful in establishing diagnoses for relapse of mixed cryoglobulinemia, Schnitzler disease, and gamma-heavy chain disease. In 1 patient with abnormalities on the chest X-ray, angiotensin converting enzyme (ACE) was helpful in finding sarcoidosis. In 1 patient with histologically proven sarcoidosis, ACE was false negative. Antineutrophil cytoplasmatic antibody (ANCA) helped establish the diagnoses for polyarteritis nodosa (n = 1) and Wegener disease (n = 2). ANCA was false positive in patients with the following final diagnoses: relapse of cryoglobulinemia, ulcerative colitis, lung empyema with Actinomyces spp., hypersensitivity vasculitis, chronic pyelonephritis in ureter obstruction, sarcoidosis, and in 2 patients without diagnoses who recovered spontaneously without signs of vasculitis.

(TABULAR DATA NOT REPRODUCIBLE IN ASCII)

Endocrine investigations: In 1 patient who had diarrhea and weight loss, thyroid stimulating hormone (TSH) and thyroxine (T4) measurements proved the diagnosis of hyperthyroidism. In 4 patients, TSH was downregulated but hyperthyroidism was excluded by further testing. Diagnoses in these 4 patients were recurrent urinary tract infections,

chronic pseudomonas infection of the lungs, hypersensitivity vasculitis, and no diagnosis, respectively. Plasma cortisol (n = 16), carcino-embryogenic antigen (n = 11), and (Alpha)-fetoprotein (n = 16) did not help in finding diagnoses.

Microbiologic serology (see Table 4): In all patients with cytomegalovirus infection, atypical lymphocytosis was present. The following serology did not help in establishing diagnoses in this study: Epstein-Barry virus (n = 92), Mycoplasma pneumoniae (n = 99), Brucella spp. (n = 73), Toxoplasma gondii (n = 85), Borrelia burgdorferi (n = 72), Coxiella burnetii (n = 78), Chlamydia psittaci (n = 62), human immunodeficiency virus (HIV) (n = 38), influenza virus (n = 44), Leptospira spp. (n = 12), respiratory syncytial virus (n = 36), and rubella virus (n = 11). In 1 of 56 patients, serology for parainfluenza virus was positive. This patient also had right-sided heart failure and no other cause for the fever could be found; she recovered without specific therapy within 5 weeks. In 1 of 19 patients, a positive Widal test for Salmonella typhi was helpful in establishing the diagnosis, although cultures (blood, stools, urine) remained negative after empirically started antibiotics before admission to the hospital. Because of the clinical picture and course we concluded that she did have typhoid fever.

In 117 patients, serology for Yersinia enterocolitica was performed using the immunoblotting technique as described in the Methods section. Serology was negative in 57 patients, equivocal in 44 patients, and positive in 15 patients. The test was considered true positive in 3 of the 15 patients with positive serology: after 6 weeks of treatment with ciprofloxacin, their fever resolved, serology became negative, and no other cause for the fever could be found. After a follow-up of more than 3 years, these 3 patients remained afebrile. In 12 patients the test was considered false positive; treatment of more than 6 weeks with doxycycline and ciprofloxacin had no effect on the fever, and, in most of the 12, other causes for fever were found: malignant lymphoma (n = 2), light adnexitis, urinary tract infection, relapse of rheumatoid arthritis, mixed cryoglobulinemia, nonclassifiable granulomatous myositis, factitious fever, sarcoidosis, and no diagnosis (n = 3). Overall sensitivity and specificity were 100% and 89%, respectively (confidence intervals: 0.29-1.0 and 0.82-0.94, respectively).

Culture techniques (see Table 4): Aerobic and anaerobic blood cultures, obligatory investigations in our diagnostic protocol, were performed in all patients. In 8 (5%) patients these cultures contributed more or less to establishing the diagnosis: endocarditis in 2 patients, abscesses in 3 patients, an infected central venous device, Pseudomonas spp. bacteremia in pneumonia, and diverticulitis. In 19 patients false positive blood cultures were found growing coagulase-negative staphylococci (n = 10), Streptococcus viridans (n = 3), Mycobacterium kansasii, Corynebacterium spp., Propionibacterium spp., an anaerobic Gram-negative rod, an aerobic sporulating rod, and Enterobacter cloacae combined with Bacillus spp. (1 patient each). Blood cultures from a patient with ischemic colitis as a later complication and stomach cancer as cause of FUO grew Bacteroides fragilis; we consider these results equivocal.

Urinary cultures (n = 134) were helpful in establishing the diagnosis in 5 patients. None of the 69 patients with a normal urinary sediment turned out to have a urinary infection. In 5 patients the test was considered false positive. After treating the assumed urinary tract infection adequately, bacteriuria disappeared, whereas the fever remained unchanged. In 24 patients bacteriuria was found with less than (10.sup.5) microorganisms/mL; there were no signs of a urinary tract infection in any of them.

Fecal cultures for Salmonella spp., Campylobacter jejuni, Shigella spp., and Yersinia enterocolitica were performed in 92 patients; none of the cultures was positive. In 1 patient the clinical course combined with a positive Widal test suggested salmonellosis as cause of the FUO; cultures probably remained negative because of empirically started antibiotics before admission.

None of the cultures of blood, urine, and gastric fluid for Mycobacterium tuberculosis was positive, and none of the cultures for other microorganisms performed without PDCs in accordance with the diagnostic protocol contributed to the diagnosis.

Other cultures contributing to the diagnosis always were performed because PDCs were present for infection (that is, culture of liver biopsy in a patient with cryptococcal infection, cerebrospinal fluid in a patient with Spitz-Holter drain and hyponatremia, lymph node in a patient with tuberculous lymphoma, pleural fluid in a patient with actinomycosis,

central line tip in a patient with infected central venous device, and pericardium biopsy in a patient with tuberculous pericarditis).

Imaging techniques (see Table 5): A chest X-ray helped to establish the following diagnoses in 6 patients without PDCs for chest diseases: Hodgkin disease, malignant lymphoma, recurrent pneumonia combined with urinary tract infection, disseminated cryptococcosis, systemic lupus erythematosus, and sarcoidosis. One patient with pleural empyema had a normal chest X-ray, but scintigraphic and computed tomography (CT) techniques revealed the diagnosis. Assuming all other chest X-rays to be true negative, we calculated overall sensitivity and specificity (see Table 5).

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Upper abdominal ultrasonography was performed in only 158 of 167 patients because an abdominal CT had already been performed in 9 patients before inclusion or referral to the university hospital. Upper abdominal ultrasonography contributed to the following diagnoses: malignant lymphoma, liver abscess and pelvic abscess (2 patients each), angioimmunoblastic lymphoma, gamma-heavy chain disease, sarcoidosis, right-sided heart failure, systemic lupus erythematosus in a patient with enlarged Kidneys and abnormal ultrasound reflections, liver metastasis (seen on second ultrasonography), chronic pyelonephritis in ureter obstruction, and tuberculous pericarditis. Abnormal findings were seen on ultrasonography in 68 patients, but in 12 (8%) patients the findings led to unnecessary investigations and thus were considered false positive. In 3 patients ultrasonography was considered false negative because abdominal CT revealed the diagnosis.

Abdominal CT was helpful in making the diagnosis in 2 patients without PDCs (that is, pericarditis due to vasculitis in rheumatoid arthritis and malignant lymphoma, respectively). In 14 patients abdominal CT was considered false positive because it led to unnecessary investigations like laparoscopy, puncture of suspected lesions, or laparotomy. Abdominal causes for the fever were not found in any of the patients with a normal abdominal CT. Considering these CT to be true negative, we calculated overall sensitivity and specificity (see Table 5).

In 3 patients without PDCs, a chest CT enabled us to diagnose tuberculous pericarditis, malignant lymphoma, and dermatomyositis with interstitial lung fibrosis, respectively. In 1 patient, the chest CT was normal, but shortly thereafter an enlarged axillary lymph node became palpable, which turned out to be a lymph node metastasis of a previously treated larynx carcinoma.

Transthoracic echocardiography was useful in finding the following diagnoses in 6 patients with PDCs for cardiac disease: endocarditis (n = 2), pericardium infiltration in acute leukemia, mitral and tricuspid valve disease in heart failure, pericarditis due to vasculitis in rheumatoid arthritis, and tuberculous pericarditis. In 1 patient with endocarditis proven at autopsy, echocardiography was negative several times.

X-ray of the colon helped to find the following diagnoses in 3 patients with PDCs: colonic polyp in Streptococcus bovis endocarditis, diverticulitis, and diverticulitis causing multiple hepatic abscesses.

X-ray series of the small bowel (n = 24) did not contribute to the diagnosis in this study. Abnormal pictures (nodular ileitis not consistent with Crohn disease) were found in 1 patient with positive Yersinia enterocolitica serology. Prolonged courses of antibiotics did not cure this patient, and he still suffers from periodic fever.

Imaging techniques that were helpful in finding the diagnosis (only in patients with PDCs) were the following: 2 of 19 brain CTs, showing infarction in 2 patients with endocarditis; CT of thoracic spine showing lesions of Hodgkin disease; intravenous pyelography showing obstruction of the left ureter in pelvic abscess; 1 of 10 mammograms showing a lesion that proved to be cancer; 2 of 13 Doppler ultrasound studies showing venous thrombosis and a lesion that turned out to be T-cell lymphoma.

Scintigraphic techniques (see Table 5): Results of the indium-111-labeled polyclonal immunoglobulin G ((In.sup.111)IgG) scintigraphy are described extensively elsewhere (8) (see Table 5). Other scintigraphic methods like (In.sup.111)-leukocyte scintigraphy (performed in 16 patients) and Technetium-99m-leukocyte scintigraphy (8 patients) were all performed in patients without PDCs for local inflamation or infection and did not help establish a diagnosis. In 6 patients, positive scans were found but after extensive further investigations, no local inflammation could be confirmed. An infection was found only in 2 of 17 patients with negative scans.

Gallium-67 scintigraphy was performed in 27 patients (see Table 5). A

localized inflammation was not found in any of the 15 patients with negative scans. Considering these scans to be true negative, we calculated overall sensitivity and specificity.

A bone scintigraphy helped to find the following diagnoses in 4 patients with PDCs for local inflammation: Hodgkin disease (n = 2), Still disease (showing arthritis), and bone metastasis of breast cancer. In 1 patient with endocarditis and osteomyelitis caused by Staphylococcus aureus, bone scintigraphy was false negative.

Histologic investigations (see Table 5): Bone marrow aspiration helped to establish the diagnosis in 1 patient with acute monocytic leukemia. This patient had an extreme left shift in the peripheral blood, and 2 previous bone marrow aspirations were not conclusive. In 2 patients, bone marrow cytology was false positive. In the first patient, myelodysplastic syndrome was suspected in the first aspiration, but after spontaneous recovery, this could not be confirmed. He has been afebrile for more than 3 years now, and a diagnosis has never been established. In the other patient, myelodysplastic syndrome was suspected but at autopsy, culture-negative endocarditis was found. In 6 patients bone marrow aspiration did not yield specific abnormalities, whereas bone marrow biopsy was helpful in establishing the diagnosis; considering these tests as false negative, and the remaining tests as true negative, we calculated overall sensitivity and specificity (see Table 5).

Liver biopsy was helpful in finding the diagnosis in 3 (9%) patients. In 1 patient without PDCs for liver disease, liver biopsy helped establish the diagnosis of granulomatous hepatitis. No underlying disease was found, and after therapy with corticosteroids, his condition improved in several months, without recurrence for 4 years now. In 1 patient with disturbed liver chemistry only, liver biopsy was helpful in finding the diagnosis of disseminated cryptococcal infection. In a third patient with abnormal liver chemistry, ultrasonography of the upper abdomen was normal in the first week of admission. A second ultrasonography showed a large lesion in the liver, a biopsy of which revealed adenocarcinoma. In 22 patients, liver biopsy showed nonspecific abnormalities only. In 1 patient a blind liver biopsy was false negative, showing nonspecific abnormalities only, whereas histology of biopsies at laparoscopy showed granulomatous hepatitis.

Bone marrow biopsy aided in the diagnosis in 9 (18%) patients. In 4 patients without PDCs for blood disorders or lymphadenopathy, the diagnoses malignant lymphoma and Hodgkin disease (2 patients each) were found with the help of bone marrow biopsy. In 3 patients with peripheral blood smear abnormalities (leukopenia in 2, extreme left shift in 1), biopsy established the following diagnoses: Hodgkin disease, acute myelofibrosis, and acute monocytic leukemia. Bone marrow biopsy in 1 patient with hot spots on a bone scintigraphy established the diagnosis of metastasis of an adenocarcinoma of the breast. The fifth patient had generalized lymphadenopathy, and bone marrow biopsy pointed to the diagnosis of angioimmunoblastic lymphoma, which was confirmed by a third lymph node biopsy. In 3 patients the results were false positive. In 1 patient, bone marrow biopsy suggested myelodysplastic syndrome, but a repeated biopsy could not confirm this. Eventually, temporal arteritis proved to be the cause of the fever. In 1 patient the bone biopsy showed features of malignant lymphoma, but the patient recovered spontaneously and a second bone biopsy was completely normal. She has been afebrile for 3 years now. In a third patient, Hodgkin disease was suspected from bone marrow biopsy, but after revision the diagnosis was sarcoidosis. Since in 3 of 37 patients with normal bone marrow biopsies, disorders that could have involved the bone marrow (angioimmunoblastic lymphoma, Hodgkin disease, and gamma-heavy chain disease) were found eventually by other means, the possibility exists that the results were false negative. It therefore seems hazardous to give figures for sensitivity and specificity.

Bronchoalveolar lavage (BAL) was performed in 21 patients for cytologic and microbiologic investigations, 19 of whom had abnormal chest radiographs. In 1 patient only, BAL established the diagnosis. This patient had culture-negative pleural empyema; histologic examination of the BAL fluid showed Actinomyces colonies. After a 6-week treatment with penicillin, fever and symptoms subsided.

In 25 patients a skin biopsy was performed, including 2 patients without skin lesions. In 3 patients with skin lesions, the procedure helped to find the following diagnoses: urticarial vasculitis, hypersensitivity vasculitis, and erythema nodosum in the context of tuberculous axillary lymphoma. In 15 patients, nonspecific abnormalities were found. In 1 patient, skin biopsy suggested septic embolism. Treatment with penicillin had no effect. Because of complaints of arthritis and urethritis with

conjunctivitis and moderate response to salicylate, the presumed diagnosis was Reiter disease. The patient's complaints disappeared completely after 8 months, and 3 years later no other cause for the fever has been found.

Biopsy of skin and, muscle was performed in 17 patients with PDCs (skin diseases or abnormal electromyography) (see Table 5). In 1 patient with abnormal electromyography, histologic examination of the biopsy material revealed lymphocytic arteritis; the patient recovered spontaneously after 1 month without a diagnosis being made. He has been free of disease for more than 4.5 years now.

In 24 patients, erlarged lymph nodes were removed for histologic and microbiologic investigations; this procedure helped to establish the diagnosis in 12 (50%) of them. No pathologic lymph nodes were present at physical examination upon admission in 5 of these 12 patients, but in 11 of these 12 patients, generalized lymphadenopathy was demonstrated after extensive ultrasonographic and radiographic investigations. Lymph node biopsies were not helpful in establishing the diagnosis if lymphadenopathy was confined to the cervical or inguinal region (n = 8). In the case of generalized lymphadenopathy, biopsy was helpful in 11 of 14 patients (Fisher exact test, p = .001).

In 3 of 4 patients with urine abnormalities, renal biopsy was helpful (Wegener disease, systemic lupus erythematosus, mixed cryoglobulinemia with glomerulonephritis).

A lumbar puncture was performed in 11 patients; in 2 as a screening procedure without any PDCs, implying a violation of the diagnostic protocol. In 2 (18%) patients this technique was helpful in finding the diagnosis; both patients had severe headache but no signs of meningitis. hi these patients a sterile mononuclear infiltrate of the cerebrospinal fluid was found, and in 1 patient biopsy of the meninges was negative. The presumable diagnosis of Mollaret meningitis was established in both by exclusion of other diseases.

In 5 patients, splenectomy was part of the diagnostic workup before referral because splenomegaly was found; it led to the diagnosis in 2 patients. In the first patient, there was a discrepancy between the histology of the bone marrow biopsy and that of the spleen; the diagnosis remained uncertain until generalized lymphadenopathy developed and lymph node histology was done which showed angioimmunoblastic lymphadenopathy with dysproteinemia (AILD). In the second patient, bone marrow biopsy was suspect for Hodgkin disease but proof could be found only by spleen histology.

Other successful histologic investigations performed because PDCs were present were articular puncture (n = 3) proving pseudogout in 1 patient, gastrocopy (n = 11) with gastric biopsy proving 1 case of stomach cancer, pleural puncture (n = 13) pointing to systemic lupus erythematosus in 1 patient, and pericardial puncture (n = 1) in 1 patient proving tuberculous pericarditis.

Predictors of likelihood of reaching a diagnosis

Univariate analysis (Table 6): For all parameters and PDCs, the value of predicting the likelihood of reaching a diagnosis was established with help of univariate analysis. Parameters that were significantly different between patients with a final diagnosis and patients without a diagnosis are listed in Table 6. Of all specific and nonspecific PDCs in the history and physical examination, only night sweats reached statistical significance. There was also no significant difference between the 2 groups concerning sex, presence of PDCs, use of the screening diagnostic protocol, age, duration of fever, referral pattern, and fever pattern (continuous versus discontinuous).

TABLE 6. Significantly different parameters in patients with and without diagnosis(*)

Parameter (No. of Patients)	No Diagnosis (n = 50) No. (%)	Diagnosis (n = 117) No. (%)
Elevated ESR (164)	38 (76)	104 (90)
Abnormal Hb (167)	29 (58)	98 (84)
Abnormal sodium (164)	5 (10)	32 (28)
Lowered serum protein (151)	9 (19)	41 (39)
Abnormal protein electrophoresis (145)	29 (63)	92 (93)
Abnormal ASAT (167)	10 (20)	45 (39)
Proteinuria (151)	6 (14)	36 (33)
Night sweats (140)	40 (91)	70 (75)
Periodic fever (167)	28 (56)	28 (24)

Hospitalization (is less than or equal to) 21 days		26 (52)	34 (20)
Median hospitalization in days (range)		19 (7-83)	34 (7-295)

Abbreviations: ESR = erythocyte sedimentation rate; Hb = hemoglobin; ASAT = aspartate aminotransferase. (*) Using univariate analysis.

Logistic regression of prediction of possible diagnosis (Table 7): All values of the variables admitted in logistic regression were known in 92 patients. After stepwise selection, 3 variables remained in the logistic regression model: serum protein electrophoresis (1 = normal, 2 = abnormal), periodic fever (1 = 1 period, 2 = more than 1 period) and hemoglobin (Hb) (1 = normal, 2 = abnormal). In an additional 53 patients the values of serum protein electrophoresis, periodic fever, and Hb were known, while some of the other admitted variables had missing values. With the regression coefficients (1.83, -1.43, 1.21, respectively) and an intercept of -2.70, we estimated the probability of finding a diagnosis.

(TABULAR DATA NOT REPRODUCIBLE IN ASCII)

Discussion

In this study, we prospectively evaluated the utility of diagnostic techniques used in patients with FUO. In a retrospective study on FUO(9), we found that the use of diagnostic techniques was abundant, whereas in many cases the exact indication for the investigation could not be retrieved. The present study allows us to draw conclusions on the overall diagnostic value of many of these techniques, and by prospective registration of PDCs, estimate the screening diagnostic value of many of these techniques.

The merit of chemical investigations is mainly to direct the physician to the possible location of disease, making a more selective search possible; only rarely do these investigations lead directly to the diagnosis. In this study, 50% of the patients were found to have nonspecific liver disturbances, but in only 6 (4%) patients were specific liver diseases the cause of FUO. Thus, finding such disturbances is relatively meaningless. This is in agreement with data from earlier studies(23, 34) showing that abnormal liver tests in FUO are not predictive of a diagnostic liver biopsy.

The diagnostic yield of immunologic serology is also relatively low. Although antinuclear antibodies, rheumatoid factors, ACE, ANCA, antibody to dsDNA, and extractable nuclear antigen sometimes contributed to the diagnosis, these tests are more often false positive and are of little use without PDCs pointing to specific immunologic disorders. Mixed cryoglobulinemia turned out to be a rather common cause of FUO, even in patients without specific PDCs and underlying disorders. Thus, U& investigation seems worthwhile even in patients without PDCs.

In the literature, atypical subacute thyroiditis(42) and other masked thyroid diseases(44, 45) appear as a cause of FUO. Most of the patients reported did not have overt thyrotoxicosis but had some features of thyroid disease such as weight loss despite a good appetite and frequent bowel movements. This finding was confirmed in our series. It can be concluded that the diagnostic yield of thyroid testing without the presence of any PDCs for thyroid disease is very low.

In all published series on FUO, infections are the most common cause of FUO. The screening value of microbiological serology in patients without PDCs has never been studied before in patients with FUO. In our series of patients without PDCs for infection, the diagnostic yield of these tests appears to be very low. Such investigations should not be used as screening procedures early in the diagnostic process for patients without PDCs for specific infections. Serology for cytomegalovirus infection appears to be helpful only in patients with PDCs for cytomegalovirus infection (for example, atypical lymphocytosis), as previously described(32, 40). A relatively new technique used in this series is Western blot serology for Yersinia enterocolitica. Although occasionally helpful, its low specificity seems to limit the use in this group of patients.

The diagnostic yield of imaging procedures is often difficult to establish because the yield of these techniques depends on other investigations performed already. In our study we tried to avoid this problem by including a chest radiography and abdominal ultrasonography in the first obligatory part of the diagnostic protocol and by dividing the protocol into 2 stages. When there were pulmonary complaints or abnormalities at physical examination, the chest radiography was very useful, but even in patients without pulmonary disorders this simple technique was of use sometimes.

We included abdominal ultrasonography as an obligatory test in all included patients with FUO. Extrapolation of data presented by comparative studies on abdominal ultrasound and CT in the patient with FUO is hazardous. Only 1 study(33) tried to minimize systemic bias as to the type of examination performed last (the diagnostic yield of techniques is dependent on the techniques already used), by scheduling patients so that each examination was performed first in roughly one-third of patients. In this study it was found that the 2 modalities have a similar ability to detect local inflammation. We had several reasons for choosing ultrasonography instead of CT as an obligatory test: the relatively low cost, no radiation burden, little discomfort for the patient. In a substantial proportion of patients, upper abdominal ultrasonography was useful, and we feel this test should remain obligatory in the diagnostic workup of all patients with FUO. However, we should keep in mind that in a considerable proportion of patients, upper abdominal ultrasonography was false positive and led to unnecessary investigations. Ultrasonography of the pelvis was not useful in patients without PDCs and led to unnecessary investigations in some patients. When negative in a patient with prolonged fever, the abdominal ultrasonography has to be supplemented by abdominal CT in a later phase, which has a very high sensitivity. One has to be careful, however, not to overinterpret CT data because of the relatively low specificity. Unnecessary and invasive diagnostic procedures may be initiated. Sensitivity and specificity of abdominal and chest CT appear to be similar; the latter has not been studied previously in patients with FUO.

Not much is known about the value of echocardiography in patients with FUO. Our results show that in patients with more than 3 weeks of fever, the technique was useful only in patients with PDCs for cardiac abnormalities (that is, heart murmur, friction rub, or chest pain) and that it is not an appropriate technique to use early in the diagnostic process when such PDCs are absent.

Scintigraphic techniques were useful only in patients with PDCs for local inflammation or infection, as we have extensively discussed elsewhere(8). These techniques were useless as screening procedures in our population of patients.

Radiologic evaluation of the gastrointestinal tract can be valuable if performed in the proper setting. In our study it never was useful as a screening procedure, and we believe it should not be used as a screening procedure in patients without abdominal PDCs. Even in the presence of microcytic anemia, abnormalities of the gastrointestinal tract were not responsible for the FUO in our series.

We used X-rays of the sinuses as a screening procedure, as advised by others(16, 38, 39, 43). The diagnostic yield was very low, and, in many patients, false positive findings led to unnecessary investigations.

Bone marrow aspiration was of little use in the absence of PDCs for a bone marrow disorder. Thus, as a screening procedure this technique is of little use, and anemia alone is certainly not a reason to perform this investigation in patients with FUO.

The diagnostic yield of liver biopsy in patients with FUO has been studied extensively in the past. It is likely that selected groups of patients with PDCs for liver abnormalities were studied. In our study, liver biopsy was part of the second stage of the screening diagnostic protocol and was performed in 9 patients without PDCs for liver abnormalities, yielding 1 case of unexplained granulomatous hepatitis. We are aware of the discussion whether the descriptive diagnosis "granulomatous hepatitis" is a real diagnosis or should be put in the "no diagnosis" group(30). In order not to conceal this interesting group of patients even though the causal relationship between granulomatous hepatitis and FUO is not clear, and, in most cases, the entity is secondary to a vast variety of diseases(15, 20), we did not classify this condition in the "no diagnosis" group. We feel that liver biopsy in the absence of PDCs may be of some use in a later stage of the diagnostic workup.

In our population of patients with FUO, bone marrow biopsy had a relatively high diagnostic yield when performed in a later stage of the diagnostic process, even in the absence of PDCs. We are not aware of other studies investigating the screening value of this technique.

Because temporal arteritis is an important cause of FUO in patients older than 50 years(30), we included temporal biopsy as a screening procedure in a later stage of the diagnostic protocol in patients older than 55 years. Despite this rigorous search, temporal arteritis was found in only 2 patients without PDCs and in 2 patients with typical complaints. Thus, in our study the diagnostic yield was not as high as in that of

Knockaert and colleagues(30), who found temporal arteritis in 15% of the cases. In a late stage of workup and before starting empirical corticosteroids, it is justified to perform such a biopsy.

The role of the BAL in patients with FUO has not been elucidated. Although in most patients undergoing BAL, chest radiography was abnormal, the diagnostic yield was very low. Selection of patients was probably the most important reason for this low utility. The technique is used early in the diagnostic process of lung abnormalities, and patients in whom the procedure is useful will probably not classify as FUO.

In this study the screening value of small-intestinal biopsy was nil. It was also of little value in patients with abdominal complaints, probably because Crohn and Whipple disease and coeliac disease were not found in our series. We feel it should not be used as a screening procedure early in the diagnostic process.

Skin and skin-muscle biopsy had a diagnostic yield of 35% in our series, only when performed in patients with skin abnormalities and/or abnormal electromyography. Other studies on polyarteritis nodosa (PAN), systemic necrotizing vasculitis, and FUO(6, 35, 49) also showed that skin-muscle biopsy is useful only in suspect skin or muscle areas.

In our population, if lymphadenopathy was confined to the cervical or inguinal region (with negative X-ray of chest and abdominal ultrasound), lymph node biopsy was not helpful in establishing the diagnosis, in contrast to patients with generalized lymphadenopathy in whom it had a high yield.

Unlike in the study of Knockaert(30), blood cultures were still helpful in establishing the diagnosis of endocarditis in 2 of our patients. In both patients blood cultures became positive after the patient stopped taking empirically started antibiotics, an aspect already emphasized by others(3, 25, 40).

It can be concluded from our series that cultures of urine, of sputum, and from other specific sites were useful only in patients with PDCs pointing to those sites. By performing screening cultures the risk of confusion with false-positive cultures is greater than the diagnostic yield.

Tuberculin skin testing was positive in 2 patients who turned out to have active tuberculosis; in a third patient with tuberculosis, a skin test was not performed. In none of the other patients was a positive purified protein derivative (PPD) found, reflecting the low prevalence of tuberculosis in our country. In other series tuberculin testing did not perform so well because of the high rates of false negative tests in patients with active tuberculosis (up to 25%)(37) and high rates of positive tests without active disease in certain subgroups like elderly patients(5) and immigrants from developing countries(47).

The importance of PDCs has been emphasized in many reviews of FUO. The attending physician is advised to observe the Sutton Law: "to go where the money is"(4, 13, 27, 36, 50). The value of PDCs has not been evaluated systematically before. Two retrospective studies showed significantly lower chances of reaching a diagnosis when no PDCs were present(9, 51). This was not confirmed in the present study, in which we prospectively registered and used PDCs and found that the presence of PDCs does not increase the likelihood of reaching a diagnosis. Because of the low percentage of patients without PDCs, these findings have to be interpreted carefully: we have no doubt that the search for PDCs remains the most important tool for the doctor to find the cause of FUO, but our study demonstrates that many of these PDCs are misleading and do not lead to a diagnosis. In univariate and logistic regression analysis of patients with and without a diagnosis, we found significant differences only for periodic or intermittent fever, erythrocyte sedimentation rate (ESR), and hemoglobin, in accordance with Knockaert(29). The chances of finding a diagnosis is significantly higher in patients with continuous fever, high ESR, and low hemoglobin. It is interesting to see that other PDCs and parameters, such as hepatosplenomegaly, age, duration of fever, the existence of PDCs, and the use of the screening diagnostic protocol, did not influence the likelihood of finding a diagnosis.

It was surprising that our diagnostic protocol was of use in 26% of the patients to whom it was applied. Indeed, this figure seems high, but when we look at the investigations that really are of diagnostic value when used as screening procedure, only a few should be used that way: temporal artery biopsy in patients older than 55 years, fundoscopy, sophisticated serology for Yersinia enterocolitica, serum for cryoglobulinemia in an early stage, and bone biopsy and abdominal and chest CT in a later stage of the diagnostic process. This means that the screening diagnostic protocol

can be limited rigorously in the absence of PDCs.

Ordering investigations as screening procedures in the hope (mostly vain) that something abnormal will come up has many disadvantages, like possible adverse reactions or complications, loss of faith of the patient, staggering costs of testing, and -- perhaps most important -- a soporific effect on the doctor's diagnostic mental activities. Repeating a thorough history-taking, physical examination, and obligatory investigations and waiting for PDCs to appear probably is better than ordering more screening investigations in the hope that something abnormal will come up. Supportive treatment with nonsteroidal anti-inflammatory drugs. (NSAIDs) can be helpful at this stage. Only rarely do patients deteriorate while using NSAIDS without presenting new PDCs. In these rare patients, further diagnostic workup should be performed or a therapeutic trial with, for example, antibiotics, steroids, or antituberculous agents started.

Summary

From January 1992 until January 1994, we used a standardized diagnostic protocol for the 167 immunocompetent patients with fever of unknown origin (FUO) admitted on the internal medicine wards in all 8 university hospitals in the Netherlands. This protocol consisted of a standardized coded history and standardized physical examination for all 167 patients. A number of additional obligatory investigations had to be performed in the first week of admission for all patients, and all potentially diagnostic clues (PDCs) thus retrieved had to be registered. In the presence of PDCs, specific investigations had to be performed based on the differential diagnosis. In the absence of PDCs or in the presence of only misleading PDCs, patients underwent a screening 2-staged diagnostic protocol.

In 162 (97%) patients, PDCs were present after 1 week of admission. In 61 patients these PDCs were all misleading. The likelihood of reaching a diagnosis in patients with PDCs was not significantly higher than that in patients without PDCs, probably because of the high proportion of misleading PDCs. The likelihood of establishing a diagnosis was significantly lower ((is less than) 10%) only for patients with recurrent fever, normal erythrocyte sedimentation rate (ESR), and normal hemoglobin. All other PDCs were not significantly different in patients with a diagnosis compared with patients without a diagnosis.

The screening 2-staged diagnostic protocol proved useful in 10 of 43 patients in whom it was used. The screening value of immunologic and microbiologic serology and endocrine investigations was nil; these investigations probably should be performed only when PDCs for the disease searched for are present. Scintigraphic techniques, echocardiography, and other imaging procedures were never helpful in our population in the absence of PDCs. Many patients with FUO had nonspecific anemia and disturbed liver chemistry. In the presence of these findings alone, without other more specific PDCs, the likelihood reaching a diagnosis with help of bone marrow aspiration was nil, and with help of liver biopsy, it was low. Enteric biopsy was never helpful. If lymphadenopathy was confined to the cervical or inguinal region (with negative chest X-ray and abdominal ultrasound), lymph node biopsy was not helpful, in contrast to patients having generalized lymphadenopathy, in whom the technique had a yield of 79%.

As shown in this study, the search for PDCs remains an important tool for establishing the diagnosis in patients with FUO, although in many cases these PDCs appear to be misleading. Directed diagnostic workup -- using the PDCs retrieved by repeated, meticulous history taking and physical examination -- remains the most efficient and intellectually satisfactory way to solve the problem of FUO in the individual patient. A standard protocol in patients with FUO in whom the obligatory investigations, as used by us, do not lead to the diagnosis can be limited to the tests that proved to be of some use as screening procedure: temporal biopsy in patients older than 55 years; fundoscopy; serology (Western blot) for Yersinia enterocolitica; serum for cryoglobulin at an early stage of the diagnostic process; and bone biopsy, liver biopsy, abdominal computed tomography (CT), and chest CT at a later stage. Repeating a thorough history-taking, physical examination, and obligatory investigations and waiting for PDCs to appear probably is better than ordering more screening investigations in the hope that something abnormal will come up. Supportive treatment with nonsteroidal anti-inflammatory drugs (NSAIDs) can be helpful at this stage. Only rarely do patients deteriorate while using NSAIDs without presenting new PDCs. In these rare patients, further diagnostic workup should be performed or a therapeutic trial with, for example, antibiotics, steroids, or antituberculous agents started.

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I. A prospective multicenter study of 167 patients with FUO, using fixed epidemiological entry criteria.(Fever of Unknown Origin (FUO))

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Introduction

Fever of unknown origin (FUO) is a challenging medical problem. Petersdorf and Beeson (30) defined FUO as an illness characterized by rectal temperature exceeding 38.3 (degrees) C on at least 3 occasions, evolving during at least 3 weeks, with no diagnosis reached after 1 week of inpatient investigation. Many retrospective (2, 4, 5, 12, 15, 18, 20, 28, 32, 34, 35) and a few prospective (1, 16, 19, 23, 25) studies of patients with FUO have been performed using this definition. Other series have used different criteria (3, 9-11, 14,17, 21, 24, 27, 31, 33, 36), and their results are more difficult to interpret. A more recently revised definition (8, 23, 29) that excludes immunocompromised patients has not been employed in major series yet.

The spectrum of diseases causing FUO not only seems to be determined by geographical factors, but also appears to change with time. In recent series, the proportion of patients in whom no diagnosis was made has increased compared with older series (23, 28). In addition, comparison is troublesome because, on the one hand, most studies do not use uniform epidemiologic entry criteria, thus possibly introducing unintended bias, and, on the other hand, differences in diagnostic workup can influence the outcome. Consequently, uniform entry criteria and continuous auditing for completeness are necessary, and a standardized diagnostic workup is preferable.

To update information on FUO and incorporate these new ideas, we conducted a prospective, 2-year study on patients with FUO in all 8 Dutch university hospitals, in which we excluded immunocompromised patients and used a standardized protocol to minimize diversity in diagnostic management. This protocol was based on retrospective analysis of diagnostic management (5) and an in-depth inquiry into diagnostic management among internists in the 8 Dutch university hospitals (6).

Methods

The present study was undertaken from January 1992 to January 1994. Because we wanted to enroll all admitted patients fulfilling criteria for FUO, without any unintended selection bias, 2 very broad initial selection criteria were used. First, all records of nonimmunocompromised patients with fever on the internal medicine wards in all 8 university hospitals in the Netherlands were reviewed for the Petersdorf criteria for FUO once a week (illness characterized by rectal temperature exceeding 38.3 (degrees) C, evolving during at least 3 weeks, with no diagnosis after 1 week of inpatient investigation). Total bed capacity of each of the 8 university hospitals ranged from 715 to 1,260 beds. Immuno-compromised patients were considered patients with neutropenia for at least 1 week within 3 months before the onset of fever (white blood cell count (is less than) 1.0 x 109/L and/or granulocyte (is less than) 0.5 x (10.sup.9)/L); human immunodeficiency virus (HIV)-positive patients; patients with known hypogammaglobulinemia: (IgG (is less than) 5096); and patients using the equivalent of more than 10 mg prednisone for at least 2 weeks. Second, as an additional cheek, all blood culture orders were reviewed weekly at the microbiologic laboratory, and the records of the patients in whom blood cultures were ordered were reviewed. The latter procedure was added because in a retrospective study (5) we found that in all patients with FUO, blood cultures were performed. After thus having identified all patients with fever, we applied the Petersdorf and Beeson criteria (30), as described above. By combining these 2 methods, we minimized the chance of missing patients who fulfilled FUO criteria.

The study was approved by all local ethic committees. After informed consent, patients were included in our FUO protocol, which consisted of a standardized precoded history and standardized thorough physical examination. As a minimum, several additional investigations had to be performed in the first week of admission (Table 1). Much weight was given to the presence or absence of potentially diagnostic clues (PDCs), defined as all localizing signs, symptoms, and abnormalities potentially pointing

toward a possible diagnosis, and the use of these PDCs in the diagnostic process. False PDCs are defined as PDCs eventually not leading to the definite diagnosis. History, physical examination, laboratory and technical investigations, the presence of PDCs, and their use in the diagnostic process were prospectively registered in a structured data collection form. If PDCs were present, appropriate investigations were performed. If PDCs were absent or false only, patients underwent a standardized diagnostic protocol (see Table 1).

TABLE 1. Diagnostic protocol

Obligatory investigations performed in all patients Sedimentation rate; hemoglobin; mean cellular volume; platelet count; leukocyte count and differential count; serum urea nitrogen; creatinine; sodium; potassium; L Click: 493,425□fractions; alkaline phosphatase; aminotransferase; lactate dehydrogenase; creatine phosphokinase; antinuclear antibodies; rheumatoid factors; urinary analysis; %%%feces%%% for occult blood; blood cultures aerobic and anaerobic (n = 3); tuberculin test; urine, %%%feces%%%, and sputum culture when indicated; chest X-ray; ultrasonography of upper abdomen

Phase 1 diagnostic protocol in patients without PDCs (n = 5) or with misleading PDCs only (n = 38) Pulse/rectal temperature measurement by observer, fundoscopy by an ophthalmologist; calcium, phosphate, urate, amylase, and TSH/T4; immunoelectrophoresis of serum and urine; CRP; ACE; %%%ANCA%%%, anti-dsDNA, ASO; cryoglobulin; C3, C4, CH50; serology for Cytomegalovirus, Epstein-Barr Virus, Mycoplasma, Bruccella, Toxoplasma, Borrelia, Coxiella, Treponema, Yersinia; blood cultures incubating (is greater than) 1 week; blood cultures, gastric fluid, urine cultures for tuberculosis; stools for worms, eggs, cysts; bone marrow puncture and culture for Mycobacteria, Brucella, Yersinia; In-111-IgG scintigraphy; X-Ray of sinus and teeth; ultrasonography of pelvis

Phase 2 diagnostic protocol in patients without PDCs (Performed when Phase 1 did not reveal PDCs or diagnosis) Hepatitis B serology; anergy tests; repeated chest X-ray; IgD in serum; liver biopsy and culture for Mycobacteria and other bacteria and fungi; crista biopsy and culture for Mycobacteria, Brucella, and common bacteria; echocardiography; CT of abdomen and chest; X-Ray colon; temporal artery biopsy in patients over 55 years

Abbreviations: TSH = thyroid-stimulating hormone; T4 = thyroxine; CRP = C-reactive peptide; ACE = angiotensin-converting enzyme; ANCA = antineutrophil cytoplasmic autoantibodies; ds-DNA = double-stranded deoxyribonucleic acid; ASO = antistrepment 0 test; C = complement; CH50 = total hemolytic complement; In-111-IgG = indium-111-labeled polyclonal human immunoglobulin G; CT = computed tomography-, PDCs = potentially diagnostic clues.

Within 1 week of inclusion in the study, every patient was seen by the first author in order to streamline the management of the patients. Patients did not have to remain admitted; after inclusion all investigations of the protocol could be performed on an outpatient basis. The patient's clinical condition was the major reason for a longer stay in the hospital, at the discretion of the attending physician. The final diagnosis was established by the attending physician and the first author. Definite diagnoses were established by positive serology, cultures, or histology. In some patients probable diagnoses were established by excluding other disease, by the response to specific therapy, or by studying the course of the disease. A long follow-up was deemed indispensable for all patients in whom a final definite diagnosis could not be made. A final follow-up was therefore performed more than 2 years later in March 1996, by analysis of the records of the patients, telephone calls to the treating physicians, and, in some cases, telephone calls to the patients themselves.

Recurrent fever was defined in this study as at least 2 episodes of fever, with intervals of at least 48 hours without fever. Data were statistically analyzed and groups of patients compared with use of the Fisher exact test. A p value of (is less than) 0.05 (2-sided) was considered significant.

Results

Clinical features

During the 2-year period of study, 167 patients (80 male, 87 female) met the criteria for FUO. The median age was 53 years (range, 16-87 yr); 46 patients (28%) were older than 65 years. Of these patients, 139 patients were found by reviewing weekly the records of all patients with fever; in all of these patients blood cultures were done. By means of blood culture surveys an additional 28 patients were retrieved that fulfilled FUO

criteria and were not recognized as such when checking the records.

Sixty-five (390/o) patients were referred by general practitioners and 64 (38%) had already undergone extensive investigations before referral to a university hospital, whereas 7 patients (49%) were referred by other departments within the university hospitals, and 31 patients (19%) were already known with other nonfebrile conditions at the university department. The proportion of patients in whom no diagnosis could be made was slightly lower, albeit not significantly, for patients referred by general practitioners (26%) than for secondarily referred patients (33%). For the 117 patients with a diagnosis, a diagnosis was established after a median of 60.5 days from the onset of fever (range, 21-1,584 d) in those referred by general practitioners, whereas in patients referred by non-university hospitals it took a median of 166 days (range, 22-3,347 d) (p = 0.005).

Median overall follow-up after admission was 854 days (range, 10-3,387 d). In 30 patients (180/o) follow-up was less than 0.5 years. Fifteen of these 30 patients died within this period, only 1 of them without a diagnosis. In the other 15 patients, diagnosis was proved in 14 patients. One patient with probable venous thrombosis as the cause of her fever could not be traced during follow-up. The median follow-up of 50 patients without a diagnosis and 48 patients with a probable diagnosis was 1,080 days (range, 15-3,387 d). In only 3 of these 98 patients was follow-up less than 1 year.

Median duration of hospitalization was 27 days (range, 7-295 d). The median duration of fever in the group of 117 patients in whom a diagnosis was made was 78.5 days range, 21-8,804 d). Of the 50 (30%) patients in whom no diagnosis was made, 37 patients recovered spontaneously after a median of 190 days range, 30-13,844 d). Thirteen patients remained febrile; these patients had a median duration of fever of 1,021 days (range, 481-5,281 d). Except for 1 patient, patients with persistent fever all had some form of recurrent fever.

Recurrent fever was present in 56 patients. In 28 of those patients (50%), no diagnosis could be established, in contrast to 22 of 111 patients (20%) with continuous fever (p (is less than) 0.0001).

In 67 patients the fever lasted longer than 6 months. In 37 (55%) patients no diagnosis could be made, in contrast to 18 of 100 (18%) patients with fever lasting less than 6 months (p (is less than) 0.0001).

Diagnosis and outcome

In the 117 patients in whom a diagnosis was made, the diagnostic phase in the university hospital (after referral) took a median of 33 days (range, 1-1,297 d). In 42 patients the diagnosis was made after discharge during follow-up because of new emerging facts. Of the 167 patients in this series, 20 patients died during follow-up: in 18 of them a diagnosis was made, in 4 not until after autopsy. All but 1 patient succumbed to the disease responsible for the FUO. Infections were found in 43 (26%) patients, neoplasms in 21 (13%), and noninfectious inflammatory diseases in 40 (24%) patients (Table 2).

TABLE 2. Final diagnoses in 167 patients with fever of unknown origin

Diagnostic Category	No. of Patients	(%)
Infections	43	(25.7)
Bacterial(*)		
Abscess/lung empyema(*)	6	
Urinary tract infections	5	
Endocarditis	4	
Atypical or recurrent pneumonia	6	
Tuberculosis	3	
Other bacterial infections	12	
Viral		
Cytomegalovirus infection	5	
Other viral infections(*)	2	
Fungal		
Disseminated cryptococcal infection	1	
Neoplasms(*)	21	(12.6)
Hematologic	14	
Solid	7	
Noninfectious inflammatory diseases	40	(24.0)
Collagen diseases	19	(11.4)
Adult-onset Still disease(*)	6	
Mixed cryoglobulinemia	5	
Other(*)	8	
Vasculitis syndromes	14	(8.4)

Temporal arteritis	4	
Other(*)	10	
Granulomatous diseases	7	(4.2)
Inflammatory bowel diseases	2	
Sarcoidosis	2	
Other(*)	3	
rag fever	3	(1.8)
Factitious fever	2	(1.2)
Miscellaneous(*)	8	(4.8)
No diagnosis	50	(29.9)
Spontaneous recovery	37	
Persistent fever	13	

(*) See Results Section for details. ((dagger)) One patient with urinary tract infection also.

Infections: In 4 patients, abscesses were the cause of fever. In 2 patients these were liver abscesses, caused in the first patient by Escherichia coli, Proteus mirabilis, and Bacteroides fragilis, while in the second patient the abscess was culture negative at autopsy after empirical antibiotic therapy. The delay of diagnosis in these patients was due to inconclusive ultrasound examinations. In the first patient, the second ultrasonography revealed multiple abscesses in the liver; in the other patient a biopsy of the liver yielded the diagnosis. In the last 2 patients pelvic abscesses were the cause of fever, caused in 1 patient by Peptococcus species, and in the other patient by Escherichia coli and Streptococcus milleri. In these patients the delay was due to failure to order pelvic ultrasonography because of the absence of lower abdominal pain.

There were 2 patients with pleural empyema. In 1, the chest radiography was incorrectly interpreted, resulting in a delay in the diagnosis. Scintigraphy and thoracic computed tomography (CT) led to the diagnosis, and culture of pleural fluid grew Peptococcus species. In the second patient, pleural fluid cultures were sterile, but pleural biopsies yielded Actinomyces species.

In 5 patients urinary tract infection turned out to be the cause of fever; 2 of them received antibiotics for other presumed infections at the time of the first urine culture. In both patients, urine cultures yielded Klebsiella pneumoniae eventually. In the third patient, recurrent prostatitis was found by transrectal sonography, and culture of prostatic secretion yielded Klebsiella pneumoniae. In the fourth patient, chronic xanthogranulomatous pyelonephritis with obstruction of the ureter was demonstrated by abdominal CT; cultures of urine and blood remained negative. In the fifth patient, balanitis accompanied the urinary infection, cultures yielded Escherichia coli, and, after circumcision, fever subsided.

Endocarditis was found in 4 patients. Culture-negative endocarditis occurred in 2 patients, and the diagnosis was not made until autopsy by histology. In 1 of these 2 patients echocardiography had been negative, in the other echocardiography was not performed, because false PDCs were present. In the third patient, cultures became positive for Streptococcus bovis when empiric antibiotic therapy was stopped. In the fourth patient, blood cultures were not drawn in the referring hospital and empirical antibiotics were given. Because of deterioration the patient was referred to our hospital, and 2 days later blood cultures yielded Staphylococcus aureus.

In 6 patients a clinical picture of pneumonia was present. In all patients chest X-rays showed segmental infiltrates consistent with bronchopneumonia. In 3 patients bronchoscopy with culture of bronchial fluid and serology for respiratory viruses, Chlamydia, Legionella, Mycoplasma pneumoniae, and Coxiella burnetii were negative and thus no causative microorganism could be found. The first patient also had mediastinal lymphadenopathy and some pleural effusion and had already received extensive antibiotic therapy (cephalosporin, amoxicillin, flucloxacillin, and tobramycin) elsewhere without disappearance of fever. After referral, he recovered spontaneously after 8 weeks of fever. The second patient had received doxycycline, amoxicillin, gentamicin, cephazolin, and erythromycin without improvement of his condition. Isoniazid, rifampin, and pyrazinamide were given for 6 weeks without effect and stopped when cultures for tuberculosis remained negative. He recovered spontaneously over a 6-month period thereafter. The third patient was treated with penicilin, erythromycin, and rifampin for 4 weeks; after this period the patient's temperature was below 38 (degrees) C, antibiotic therapy was stopped, and the patient recovered further during the next 2

weeks. In the fourth patient with pneumonia, Haemophilus influenzae and Stenotrophomonas maltophilia were cultured first; after antibiotic therapy with cefuroxime, fever persisted. A second culture after stopping therapy revealed Moraxella cattarrhalis; antibiotic therapy with amoxicillin-clavulanate was successful. In the fifth patient, Pseadomonas aeroginosa was cultured. She was treated with ceftazidime intravenously, but fever persisted. Because of a history of tuberculosis in the past, she was then treated with isoniazid, pyrazinamide, and rifampin without result. Repeated bronchoscopic examination and culture of bronchial fluid yielded Pseudomonas aeroginosa again. After several weeks of therapy with ciprofloxacin, she recovered. In the sixth patient with pneumonia, Haemophilus influenzae and Stenotrophomonas maltophilia were cultured. Erythromycin had already been given empirically without any effect, and ciprofloxacin was added. By then Klebsiella pneumoniae had been cultured from the urine also. We concluded that this patient had 2 different infections causing the FUO. It took more than 20 days for her to recover and her temperature to normalize.

Tuberculosis was proved in 3 patients by culture. In the first patient, pericardial puncture revealed the diagnosis. In the second patient, a positive purified protein derivative (PPD) test and erythema nodosum suggested tuberculosis, but no localization seemed present after inclusion. A somatostatin scintigraphy was performed which showed activity high in the axilla. An ultrasonographic biopsy of enlarged axillary lymph nodes showed acid-fast bacilli. Cultures grew Myco-bacterium tuberculosis. The third patient had a recent history of breast cancer and bone metastasis, and lymphangitis carcinomatosis was suspected. Corticosteroids were administered empirically. Because of deterioration and in accordance with the diagnostic protocol, sputum cultures for tuberculosis were performed, which showed acid-fast bacilli. Cultures grew Mycobacterium tuberculosis eventually.

Cytomegalovirus infection was proved in 5 patients by serology (a fourfold elevation of IgG titer); in all but 1 patient lymphocytosis and atypical lymphocytes in the blood smear were found initially but false PDCs delayed the diagnostic process.

Other bacterial infections included persistent Yersinia enterocolitica infection (n = 2), diverticulitis (n = 2), recurrent sinusitis, cholangitis, adnexitis, bacterial meningitis in ventriculo-peritoneal drain with Escherichia coli, typhoid fever, occult dental infection, secondary syphilis, and infected central venous device with Staph. epidermidis and Staph. aureus.

Neoplasms: In 14 patients hematologic malignancies were found. Hodgkin disease was the cause of fever in 5 patients. In 2 patients, the diagnostic process was delayed because their fevers were erroneously attributed to previously diagnosed diseases (systemic lupus erythematosus and sarcoidosis). In 2 others there was no lymphadenopathy, and diagnosis was made by bone marrow biopsy. In the fifth patient there was only mediastinal localization of Hodgkin disease. In 4 patients non-Hodgkin lymphomas were the cause of fever. In the first of these patients, very small abdominal lymph nodes were found by abdominal CT, 3 years after successful allogenic bone marrow transplantation. Positive yersinia serology (Western blot) delayed diagnostic laparotomy in a second patient with abdominal lymphadenopathy. The third patient had a 3-year history of recurrent fever. Only misleading PDCs were present during first admission in the university hospital, and, because fever subsided, the standardized diagnostic protocol was not used. During the next episode of fever, anemia developed and bone marrow biopsy revealed non-Hodgkin lymphoma. The fourth patient had an 18-year history of progressive polyneuropathy, telangiectasis, muscle weakness, hepatomegaly, and lymphadenopathy. Despite a large series of extensive investigations, a diagnosis was never established. She had never been febrile before inclusion in our study, when a malignant T-cell tumor was identified. Other hematologic malignancies were angio-immunoblastic lymphoma (n = 2), acute leukemia, acute myelofibrosis, and gamma-heavy-chain disease (Franklin disease).

In 7 patients a variety of solid tumors was responsible for the fever. Primary tumors were found in 2 patients, 1 with breast cancer and 1 with stomach cancer. Metastasis of breast cancer (n = 2), larynx cancer, and adenocarcinoma of unknown origin were found in 4 other patients. In the seventh patient, necrosis of a dermoid tumor in Gardner syndrome was responsible for the FUO.

Noninfectious inflammatory diseases

-- Collagen diseases: The diagnosis of adult-onset Still disease was made in 6 patients. All patients met the Medsger and Christy criteria for

adult-onset Stir disease (26), but the diagnosis was made only after prolonged observation and exclusion of other diseases. Other collagen diseases found in this series were mixed cryoglobulinemia (n = 5), systemic lupus erythematosus (n = 2), reactive arthritis (n = 2), polymyalgia rheumatica (n = 1), relapse of polymyositis (n = 1), dermatomyositis (n = 1), and relapse of rheumatoid arthritis (n = 1).

-- Vasculitis syndromes: Temporal arteritis was found in 4 patients. Other vasculitis syndromes found in our series were hypersensitivity vasculitis (n = 3), polyangiitis overlap syndrome (n = 2), and Wegener disease (n = 2); Schnitzler disease (urticarial vasculitis with monoclonal Igm), vasculitis accompanying rheumatoid arthritis, and polyarteritis nodosa were found in 1 patient each.

-- Granulomatous diseases: Two patients had inflammatory bowel diseases, and 2 patients had sarcoidosis. In 2 patients granulomatous hepatitis was found, and in 1 patient granulomatous myositis was found, without underlying disease as cause of the fever.

Miscelianeous diseases: The miscellaneous group encompassed aseptic meningitis (Mollaret meningitis) without underlying disorders (n = 2); pseudogout (n = 2); and gout, venous thrombosis, hyperthyroidism, and allergic pneumonitis after radiation therapy, found in 1 patient each.

Diagnostic process

PDCs were present in 162 (970/o) patients. The 10 most common PDCs were relevant diseases in past (131 patients), weight loss (93 patients), relevant operation in past (68 patients), headache (62 patients), myalgia (58 patients), diarrhea (50 patients), vertigo (48 patients), arthralgia (48 patients), heart murmur (41 patients), pulmonary abnormalities (38 patients). These PDCs led to the diagnosis in 101 patients (62%). In 48 of these 101 patients, false PDCs were also present. In 13 patients a diagnosis was made despite the presence of false PDCs only. No clues were present in 5 patients, in 2 of whom no diagnosis was made. There was a small but not significant difference in reaching the diagnosis between patients with clues (730%) or patients without clues (600%).

In 16 patients without PDCs or with false PDCs only, diagnoses were made with the help of the standardized diagnostic protocol. More detailed information on PDCS and the use of the diagnostic protocol is found in our comparison article (6a) later in this issue.

Discussion

In this prospective multicenter study of 167 patients, FUO was due to infection in 26% of patients, neoplasms in 13%, noninfectious inflammatory diseases (NIID) in 240/o, and miscellaneous causes in 5%, whereas the diagnosis was not established in 30% of patients despite every effort. This is in agreement with the findings of our retrospective study in a single institution (5) and those of other recent series (23, 28), but in contrast to older reports (Table 3). There are a number of possible explanations for this phenomenon. First, 38% of patients were referred after undergoing extensive investigations elsewhere, comparable to the findings of Knockaert et al (280%) (23). in most series of FUO in the literature, exact data on referral patterns are lacking (1, 15, 25, 30, 32, 34). One could speculate that more difficult-to-diagnose cases are referred, with a lower chance of reaching a final diagnosis. In our series however, the proportion of patients without a diagnosis was only slightly higher in the referred group. It is more likely that the introduction of advanced diagnostic techniques had a major impact. In many patients who formerly would have been classified as having FUO because of difficulty in reaching a diagnosis, a diagnosis now is likely to be established. This is especially true for disease entities such as endocarditis, abdominal abscesses, and malignant lymphoma that can be diagnosed easily by ultrasonography, a technique used very early in the diagnostic process now. This leaves us with a group of patients fulfilling classical criteria, in whom a diagnosis is much more difficult to make with mostly self-limiting or benign fevers. There has also been a shift in diseases that cause fever. For instance, in nonimmunocompromised patients, tuberculosis has become relatively rare. Many infections in our series were due to common microorganisms. Petersdorf and Beeson (30) excluded these disorders because they represented common entities, but it is important for attending doctors to realize that FUO can be caused by such common diseases and microorganisms, which might be concealed by false PDCS or the use of antibiotics.

Compared with results of other series from university hospitals (20, 28, 30), tumors were not a common cause of FUO in the present study. This is in agreement with our retrospective survey and 1 other recent series (15, 23). This could be the result of the widespread use of advanced diagnostic techniques early in the diagnostic process -- for instance,

ultrasonography, computed tomography, and serologic techniques. As expected, some hematologic malignancies remain difficult to diagnose because of the lack of localizing symptoms. Metastases can be very small, while causing FUO and other paraneoplastic symptoms (7). The diagnostic process in patients with a history of malignancy should be focused on recurrence of the tumor.

In contrast to other series, we used a dual method to find cases. In this way, all patients that presented with FUO were retrieved. It is of interest that 3 of the 6 prospectively conducted studies on FUO did not mention the way in which cases were retrieved (1, 25, 30), and methods in the other 3 studies (2, 16, 25) still show a degree of selection bias because no control system was used to avoid missing patients fulfilling FUO criteria. Of course, serious selection bias cannot be prevented in retrospective studies.

In accordance with the suggestions made by Durack and Street (8) and Petersdorf (29) we excluded immunocompromised patients with FUO, because these patients show an entirely different spectrum of diseases causing fever. One of the criteria for FUO is admission to hospital for 1 week, without a diagnosis being established. This is a time-related criterion, which may cause important differences as it is dependent on the experience of the doctor, the facilities, and differences in management between countries or even hospitals. The differences that can be caused by this criterion make comparison between different series difficult. In our opinion, the recommendation of Knockaert et al (23) and Durack and Street (8) to shorten this period to 3 days is not an improvement, for several reasons. First, a better way to reduce bias is to change from a time-related criterion to a quality-related criterion that requires a list of certain investigations to be performed, as a minimum. We have used such a list (see Table 1). One could add directional investigations based on PDCS, performed within the first week of admission. Second, the major reason to classify patients with FUO as such is to indicate that we deal with a difficult or potentially difficult problem. In that context, maintaining the criterion of 1 week of clinical analysis seems appropriate to us, but perhaps in this regard a difference in admission policy between the Netherlands and the United States plays a role. Third, it is our experience that 3 days is often too short to exclude diseases that are easy to diagnose, because the results of cultures and serology often take more than 2-3 days.

Even if the criteria are adapted, comparing series of patients with FUO remains troublesome. Geographic factors (18, 32, 35), age distribution of the study population (11), referral pattern, hospital setting (16,20), and time and duration of study (changes in disease pattern and diagnostic management) influence the distribution of diagnostic categories. Selection bias increases when patients with FUO presenting at the outpatient department are included; prospective case finding is much harder to realize, and standardized diagnostic protocols are more difficult to implement. It would, however, be instructive to study this group of patients with a standardized protocol.

The median duration of hospitalization and of diagnostic phase was 27 days and 33 days, respectively. These figures are in accordance with figures presented by Knockaert et al (25 and 19 days, respectively) (23) and by our retrospective study (a median of 23 days of hospitalization) (5). In most other major series no such data are presented. In a review of patients with FUO in community hospitals, Kazardian (20) found that it took a median of 19 days to establish a diagnosis after a median duration of hospitalization of 1 1 days. It is possible that the difference between these data indicates a difference between the degree of difficulty of the patient groups.

The chance of reaching a diagnosis in patients with recurrent fever and fever lasting longer than 6 months is relatively low. This was also found by Knockaert et al (22).

Different nomenclature for the group of patients without infections or neoplasms has been used in series on FUO. Terms used include "rheumatic diseases," "multisystem diseases' (23), dyscollagenosis" (4,,35), "collagen diseases' (12, 15, 18, 30), "collagen vascular diseases" (1, 2, 13, 19, 20, 25), "connective tissue diseases" (16, 32, 34), and "inflammatory disorders" (8). Most series of FUO distinguish a category of diseases labeled as "collagen disorders," which includes vasculitis and autoimmune diseases. Since collagen is involved in only a few of these disorders, and an autoimmune nature is often difficult to prove, we would break a lance for using the term "noninfectious inflammatory diseases" (NIID) in the future. This category could also include granulomatous disorders, like

inflammatory bowel disease and sarcoidosis, usually listed under miscellaneous disorders. A subdivision as presented in Tables 2 and 3 stir allows for comparison with older series. NIID accompanied by fever are often classified as FUO. In these diseases, fever may precede more typical manifestations or serologic evidence by months. Moreover, many of these diseases can only be diagnosed after prolonged observation and by exclusion.

TABLE 3. Diagnostic categories in fever of unknown origin, previous and present studies (%)

	Older Major Series		
	Ref.30	Ref.25	Ref.2
Diagnostic	1961	1982	1984
Category	(n = 100)	(n = 105)	(n = 133)
Infections	36	30	32
Neoplasms	19	31	20
Noninfectious inflammatory diseases	19	15	16
Collagen diseases	(13)	(5)	(3)
Vasculitis syndromes	(2)	(4)	(11)
Granulomatous diseases	(4)	(8)	(2)
Drug fever	1	0	0
Factitious fever	3	3	4
Miscellaneous	15	8	7
No diagnosis	7	13	21

	New Series	
	Ref.23	Present
Diagnostic	1992	Study
Category	(n = 199)	(n = 167)
Infections	22.7	25.7
Neoplasms	7.0	12.6
Noninfectious inflammatory diseases	23.1	24.0
Collagen diseases	(8.5)	(11.4)
Vasculitis syndromes	(10.6)	(8.4)
Granulomatous diseases	(4.0)	(4.2)
Drug fever	3.0	1.8
Factitious fever	3.5	1.2
Miscellaneous	15.1	4.8
No diagnosis	25.6	29.9

Summary

Internal medicine wards in all 8 university hospitals in the Netherlands participated in this prospective study of fever of unknown origin (FUO) from January 1992 until January 1994 in order to update information on the spectrum of diseases causing FUO.

We used fixed epidemiologic entry criteria to achieve completeness of enrollment and to avoid unintended selection bias. After entry, immunocompetent patients were included using criteria for FUO according to Petersdorf and Beeson (30). A standardized diagnostic protocol was used, and potentially diagnostic clues (PDCs) and their used in the diagnostic process were prospectively registered. Thus, the criteria of classic FUO have been adjusted to modern times: immunocompromised patients are excluded, and the time-criterion "I week in hospital without a diagnosis" has been replaced by a quality-criterion stating that certain investigations must be performed as a minimum, and PDCS must be followed adequately for at least 1 week, without a diagnosis being reached.

A total of 167 immunocompetent patients with FUO were thus retrieved, of whom 43 (25.79%) had infections, 21 (12.60/6) had neoplasms, and 40 (24.00%) had noninfectious inflammatory diseases. No diagnosis was made in 50 patients (29.90/o), 37 of whom recovered spontaneously.

This study confirms the changing spectrum of diseases causing FUO. Indeed, as shown by another recent study, the group of patients with FUO in whom no diagnosis can be made is expanding, and mostly it concerns self-limiting or benign fevers. Others have suggested that this trend is not really occurring (29). We did not place patients with diseases of unknown origin in the "nondiagnosis" group, and indeed made presumptive diagnoses when necessary. Nevertheless, this category of undiagnosed fevers is increasing. We believe that the higher percentage of undiagnosed cases can be attributed to the greater use of advanced diagnostic techniques attendant on an increased number of self-limited illnesses in patients meeting criteria for FUO. Because of ongoing development in diagnostic techniques and the prospective influence on the spectrum of diseases causing FUO, studies should be performed regularly to update information on this subject. Because the number of outpatient evaluations for FUO is expected to increase, patients seen on an outpatient basis should be

included in future studies. To avoid unwanted selection bias, fixed epidemiologic entry criteria should be used to ensure completeness of enrollment. To shorten the period of collecting data, multicentric studies can be done using standardized diagnostic protocols.

In patients with recurrent fever or fever lasting longer than 6 months, the chance of reaching a diagnosis is significantly lower, and especially in this group one should exercise the greatest caution to avoid abundant and extensive diagnostic procedures.

The diagnostic process in patients with FUO remains an intriguing problem in medicine. Recent microbiologic techniques may be useful as an approach to the relatively large proportion of patients in whom we now fail to make a diagnosis.

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SPECIAL FEATURES: table; illustration
DESCRIPTORS: Fever--Causes of
FILE SEGMENT: HI File 149
? t s4/3,kwic/17 21 22
>>>KWIC option is not available in file(s): 399

4/3,KWIC/17 (Item 1 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

140249749 CA: 140(16)249749m PATENT
Immunoassay for distinguishing ulcerative colitis from Crohn's disease by detecting the presence of fecal anti-neutrophil cytoplasmic antibodies (ANCA)
INVENTOR(AUTHOR): Boone, James Hunter; Lyerly, David Maxwell; Wilkins, Tracy Dale
LOCATION: USA
ASSIGNEE: Techlab, Inc.
PATENT: PCT International ; WO 200422713 A2 DATE: 20040318
APPLICATION: WO 2003US27798 (20030905) *US PV408809 (20020905)
PAGES: 18 pp. CODEN: PIXXD2 LANGUAGE: English
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CLASS: C12N-000/A
DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MA; MD; MG; MK; MN; MW; MX; MZ; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU; SC; SD; SE; SG; SK; SL; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; UZ; VC; VN; YU; ZA; ZM; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ DESIGNATED REGIONAL: GH; GM; KE ; LS; MW; MZ; SD; SL; SZ; TZ; UG; ZM; ZW; AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LU; MC; NL; PT; RO; SE; SI; SK; TR; BF;

BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG

4/3,KWIC/21 (Item 2 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

01101357 **Image available**
METHOD FOR DISTINGUISHING ULCERATIVE COLITIS FROM CROHN'S DISEASE BY DETECTING THE PRESENCE OF FECAL ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODIES (ANCA)
METHODE DESTINEE A DISTINGUER LA RECTO-COLITE HEMORRAGIQUE DE LA MALADIE DE CROHN PAR DETECTION DE LA PRESENCE D'ANTICORPS CYTOPLASMIQUES ANTI-NEUTROPHILES (ANCA) FECAUX
Patent Applicant/Assignee:
TECHLAB INC, 1861 Pratt Drive, Suite 1030, Blacksburg, VA 24060-6364, US, US (Residence), US (Nationality)
Inventor(s):
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DICKMAN Jean M (et al) (agent), Shook, Hardy & Bacon L.L.P., 2555 Grand Blvd., Kansas City, MO 64108-2613, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200422713 A2-A3 20040318 (WO 0422713)
Application: WO 2003US27798 20030905 (PCT/WO US03027798)
Priority Application: US 2002408809 20020905
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE SI SK TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 4069

Fulltext Availability:
Detailed Description

Detailed Description
... S. Patent No. 6,218,120 discloses a method of determining the presence of serum %%%ANCA%%% as a marker to diagnose IBD.
However, it does not disclose a method for diagnosing....

...colitis in a patient diagnosed with IBD. Further, the method does not disclose testing human %%%feces%%% for the presence of %%%ANCA%%%.

Accordingly, there remains a need in the diagnostic industry for a non-invasive method of...

...methods
for differentiating between ulcerative colitis and Crohn's disease wherein the presence of fecal %%%ANCA%%% is used as a marker for ulcerative colitis.

In a further aspect, the present invention...

...linked immunoassays, that utilize antibodies specific to human immunoglobulins for the measurement of total endogenous %%%ANCA%%% in human
%%%feces%%%.

In yet another of its aspects, the present invention provides methods differentially diagnosing ulcerative colitis...

12073141 PMID: 9365154

Anti-neutrophil cytoplasmic antibodies in inflammatory bowel disease with special attention for IgA-class antibodies.

Gigase P; De Clerck L S; Van Cotthem K A; Bridts C H; Stevens W J; Van Outryve M; Pelckmans P A

University of Antwerp, Belgium.

Digestive diseases and sciences (UNITED STATES) Oct 1997, 42 (10) p2171-4, ISSN 0163-2116 Journal Code: 7902782

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Perinuclear anti-neutrophil cytoplasmic antibodies (P- **ANCA**) of the IgG class have been reported in inflammatory bowel disease, mainly in ulcerative colitis. Since this disease affects the gastrointestinal tract, we determined whether IgA class 1ANCA were present in inflammatory bowel disease. We used an indirect immunofluorescence assay for IgG and IgA **ANCA** testing. Sera from 34 patients with Crohn's disease and 29 patients with ulcerative colitis were collected together with clinical and laboratory data. We found IgA class **ANCA** of a perinuclear type in 52% of patients with ulcerative colitis and in 9% of Crohn's disease patients. There was a significant association between the presence of IgA **ANCA** and the occurrence of blood in the **feces** in the ulcerative colitis group (P = 0.03). IgG **ANCA** was found in 56% of patients with ulcerative colitis and in 7% of patients with Crohn's disease. Because of partial overlap between IgG and IgA **ANCA** positivity, the sensitivity of **ANCA** testing in ulcerative colitis increased from 56% up to 78% by combining IgG and IgA assays. In conclusion, IgA **ANCA** occurs with a high prevalence in ulcerative colitis. Moreover there is a possible relationship between IgA **ANCA** and disease activity in ulcerative colitis.

Tags: Comparative Study; Female; Male; Research Support, Non-U.S. Gov't

Descriptors: *Antibodies, Antineutrophil Cytoplasmic--blood--BL; *Immunoglobulin A--blood--BL; *Inflammatory Bowel Diseases--immunology--IM ; Adult; Aged; C-Reactive Protein--analysis--AN; Fluorescent Antibody Technique, Indirect; Humans; Middle Aged; Reference Values; Sensitivity and Specificity

CAS Registry No.: 0 (Antibodies, Antineutrophil Cytoplasmic); 0 (Immunoglobulin A); 9007-41-4 (C-Reactive Protein)

Record Date Created: 19971128

Record Date Completed: 19971128

7/8/4 (Item 4 from file: 155) **Links**
MEDLINE(R)

12337521 **PMID:** 10092161
Clinical and biological characteristics of immunopathological disease-related erythema nodosum in children.

1999
Tags: Female; Male
Descriptors: *Erythema Nodosum--immunology--IM; *Erythema Nodosum--pathology--PA ; Adolescent; Arthritis, Infectious--complications--CO; Arthritis, Infectious--immunology--IM; Behcet Syndrome--complications--CO; Behcet Syndrome--immunology--IM; Child; Child, Preschool; Erythema Nodosum --etiology--ET; Humans; Inflammatory Bowel Diseases--complications--CO; Inflammatory Bowel Diseases--immunology--IM; Interleukin-6--immunology--IM; Pharyngitis--immunology--IM; Pharyngitis--microbiology--MI; Streptococcal Infections--complications--CO; Streptococcal Infections--immunology--IM; Tumor Necrosis Factor-alpha--immunology--IM
CAS Registry No.: 0 (Interleukin-6); 0 (Tumor Necrosis Factor-alpha)

/8/7 (Item 7 from file: 155) **Links**
MEDLINE(R)

08481956 **PMID:** 2355407
Raised stool and serum IgA levels in undernourished infants with chronic diarrhoea and associated parasitic infestations.

Apr 1990
Descriptors: *Deficiency Diseases--immunology--IM; *Diarrhea--immunology--IM; *Feces --analysis--AN; *Immunoglobulin A--analysis--AN; *Parasitic Diseases --complications--CO ; Child, Preschool; Chronic Disease; Humans; Immunoglobulin G--analysis--AN; Infant
CAS Registry No.: 0 (Immunoglobulin A); 0 (Immunoglobulin G)

7/8/19 (Item 3 from file: 34) **Links**
SciSearch(R) Cited Ref Sci

03293180 **Genuine Article#:** NU454 **Number of References:** 28
THE ANTIINFLAMMATORY EFFECT OF AN ORAL IMMUNOGLOBULIN (IGA-IGG) PREPARATION AND ITS POSSIBLE RELEVANCE FOR THE PREVENTION OF NECROTIZING ENTEROCOLITIS
(Abstract Available)
Journal Subject Category: PEDIATRICS
Descriptors--Author Keywords: HUMAN MONOCYTES ; IGA-IGG PREPARATION ; IL-6 ; TNF-ALPHA
Identifiers-- KeyWords Plus: TUMOR-NECROSIS-FACTOR; PLATELET-ACTIVATING FACTOR; ISCHEMIC BOWEL NECROSIS; BIRTH-WEIGHT INFANTS; INTRAVENOUS USE; FACTOR-ALPHA; EXPERIMENTAL-MODEL; ESCHERICHIA-COLI; BREAST-MILK; GASTROENTERITIS
Research Fronts: 92-5141 003 (NECROTIZING ENTEROCOLITIS; SUBSEQUENT

INTELLIGENCE QUOTIENT IN CHILDREN BORN PRETERM; NEONATAL SEPTICEMIA; HUMAN-MILK BANKS; MENINGOCOCCAL MENINGITIS)
92-1157 001 (INTERLEUKIN-1 RECEPTOR ANTAGONIST (IL-1RA); TREATMENT OF SEVERE SEPSIS; CYTOKINE SERUM LEVEL)
92-3387 001 (INTRAVENOUS IMMUNE GLOBULIN; WEGENER GRANULOMATOSIS; **ANTINEUTROPHIL** CYTOPLASMIC ANTIBODIES; SYSTEMIC VASCULITIS; CHRONIC LYMPHOCYTIC-LEUKEMIA)
92-4482 001 (SECRETORY **ANTIBODIES**; MOTHERS MILK; **FECAL** LACTOFERRIN; BREAST-FED INFANTS LIMIT GASTROENTERITIS)

7/8/44 (Item 3 from file: 340) **Links**
04217751 2005-0008459
C/(A1) METHOD AND APPARATUS FOR DISTINGUISHING CROHN'S DISEASE FROM ULCERATIVE COLITIS AND OTHER GASTROINTESTINAL DISEASES BY DETECTING
THE PRESENCE OF **FECAL ANTIBODIES** TO **SACCHAROMYCES** CEREVISIAE; CELL DIFFERENTIATION WITH ENZYME-LINKED IMMUNOASSAY OF POLYCLONAL ANTIBODIES
(B2) METHOD AND APPARATUS FOR DISTINGUISHING CROHN'S DISEASE FROM ULCERATIVE COLITIS AND OTHER GASTROINTESTINAL DISEASES BY DETECTING THE
PRESENCE OF **FECAL ANTIBODIES** TO **SACCHAROMYCES** CEREVISIAE; CELL DIFFERENTIATION WITH ENZYME-LINKED IMMUNOASSAY OF POLYCLONAL ANTIBODIES

7/8/46 (Item 1 from file: 345) **Links**
Inpadoc/Fam.& Legal Stat

18859600
METHOD AND APPARATUS FOR DISTINGUISHING CROHN'S DISEASE FROMULCERATIVE
COLITIS BY DETECTING FECAL ANTIBODIES TO SACCHAROMYCES CEREVISIAE
PROCEDE ET APPAREIL PERMETTANT DE DIFFERENCIER LA MALADIE DECROHN D'AUTRES TROUBLES GASTRO-INTESTINAUX TELS QUE LA RECTOCOLITE ULCERO-HEMORHAGIQUE OU LE SYNDROME DU COLON IRRITABLE, PAR DETECTION DE
LA PRESENCE D'ANTICORPS FECAUX ANTI-SACCHAROMYCES CEREVISIAE
METHOD AND APPARATUS FOR DISTINGUISHING CROHN'S DISEASE FROM ULCERATIVE
COLITIS AND OTHER GASTROINTESTINAL DISEASES BY DETECTING THE PRESENCE
OF FECAL ANTIBODIES TO SACCHAROMYCES CEREVISIAE PROCEDE ET APPAREIL PERMETTANT DE DIFFERENCIER LA MALADIE DE CROHN D'AUTRES TROUBLES GASTRO-INTESTINAUX TELS QUE LA RECTOCOLITE ULCERO-HEMORHAGIQUE OU LE
SYNDROME DU COLON IRRITABLE, PAR DETECTION DE LA PRESENCE D'ANTICORPS
FECAUX ANTI-SACCHAROMYCES CEREVISIAE VERFAHREN UND VORRICHTUNG ZUR
UNTERSCHEIDUNG VON MORBUS CROHN VON ULZERATIVER COLITIS UND ANDEREN
MAGEN-DARM-ERKRANKUNGEN DURCH NACHWEIS DES VORHANDENSEINS VON ANTIKoRPERN GEGEN SACCHAROMYCES CEREVISIAE IN FAECES
Method and apparatus for distinguishing crohn's disease from ulcerative colitis and other gastrointestinal diseases by detecting the presence of fecal antibodies to saccharomyces cerevisiae
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PERMETTANT DE DIFFERENCIER LA MALADIE DE CROHN D'AUTRES TROUBLES
GASTRO-INTESTINAUX TELS QUE LA RECTOCOLITE ULCERO-HEMORHAGIQUE OU LE
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FECAUX ANTI-SACCHAROMYCES CEREVISIAE
METHOD AND APPARATUS FOR DISTINGUISHING CROHN'S DISEASE FROM ULCERATIVE
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D'AUTRES TROUBLES GASTRO-INTESTINAUX TELS QUE LA RECTOCOLITE
ULCERO-HEMORHAGIQUE OU LE SYNDROME DU COLON IRRITABLE, PAR DETECTION DE
LA PRESENCE D'ANTICORPS FECAUX ANTI-SACCHAROMYCES CEREVISIAE
IPC: G01N-033/564; G01N-033/53; G01N; G01N-0033/569; G01N-033/569

7/8/42 (Item 1 from file: 340) **Links**
10897771 2005-0136495 2005-0031655
C/METHOD AND APPARATUS FOR DISTINGUISHING CROHN'S DISEASE FROM
ULCERATIVE COLITIS AND OTHER GASTROINTESTINAL DISEASES BY DETECTING THE
PRESENCE OF **FECAL ANTIBODIES** TO **SACCHAROMYCES**
CEREVISIAE

7/8/43 (Item 2 from file: 340) **Links**
10630310 2004-0039979
C/INFLAMMATORY BOWEL DISEASE AND IRRITABLE BOWEL SYNDROME
IBD-FIRST CHEK DIAGNOSTIC PANEL; FOR THE MEASUREMENT OF TOTAL ENDOGENOUS
LACTOFERRIN, ANTI-SACCHAROMYCES CEREVISIAE ANTIBODIES (ASCA) AND ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODIES (ANCA) IN HUMAN FECES; KITS

7/8/44 (Item 3 from file: 340) **Links**
04217751 2005-0008459
C/(A1) METHOD AND APPARATUS FOR DISTINGUISHING CROHN'S DISEASE FROM ULCERATIVE COLITIS AND OTHER GASTROINTESTINAL DISEASES BY DETECTING
THE PRESENCE OF **FECAL ANTIBODIES** TO **SACCHAROMYCES** CEREVISIAE; CELL DIFFERENTIATION WITH ENZYME-LINKED IMMUNOASSAY OF POLYCLONAL ANTIBODIES
(B2) METHOD AND APPARATUS FOR DISTINGUISHING CROHN'S DISEASE FROM ULCERATIVE COLITIS AND OTHER GASTROINTESTINAL DISEASES BY DETECTING THE
PRESENCE OF **FECAL ANTIBODIES** TO **SACCHAROMYCES** CEREVISIAE; CELL DIFFERENTIATION WITH ENZYME-LINKED IMMUNOASSAY OF POLYCLONAL ANTIBODIES

7/8/46 (Item 1 from file: 345) **Links**
Inpadoc/Fam.& Legal Stat

18859600
METHOD AND APPARATUS FOR DISTINGUISHING CROHN'S DISEASE FROMULCERATIVE
COLITIS BY DETECTING FECAL ANTIBODIES TO SACCHAROMYCES CEREVISIAE
PROCEDE ET APPAREIL PERMETTANT DE DIFFERENCIER LA MALADIE DECROHN D'AUTRES TROUBLES GASTRO-INTESTINAUX TELS QUE LA RECTOCOLITE ULCERO-HEMORHAGIQUE OU LE SYNDROME DU COLON IRRITABLE, PAR DETECTION DE
LA PRESENCE D'ANTICORPS FECAUX ANTI-SACCHAROMYCES CEREVISIAE
METHOD AND APPARATUS FOR DISTINGUISHING CROHN'S DISEASE FROM ULCERATIVE
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FECAUX ANTI-SACCHAROMYCES CEREVISIAE
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COLITIS BY DETECTING FECAL ANTIBODIES TO SACCHAROMYCES CEREVISIAE

PROCEDE ET APPAREIL PERMETTANT DE DIFFERENCIER LA MALADIE DE CROHN D'AUTRES TROUBLES GASTRO-INTESTINAUX TELS QUE LA RECTOCOLITE ULCERO-HEMORHAGIQUE OU LE SYNDROME DU COLON IRRITABLE, PAR DETECTION DE LA PRESENCE D'ANTICORPS FECAUX ANTI-SACCHAROMYCES CEREVISIAE

IPC: G01N-033/564; G01N-033/53; G01N; G01N-0033/569; G01N-033/569

>>>W: "FREE" is not a valid format name in file(s): 123, 324, 347-349, 399, 652, 654
7/8/44 (Item 3 from file: 340) **Links**

04217751 2005-0008459
C/(A1) METHOD AND APPARATUS FOR DISTINGUISHING CROHN'S DISEASE FROM ULCERATIVE COLITIS AND OTHER GASTROINTESTINAL DISEASES BY DETECTING THE PRESENCE OF **FECAL ANTIBODIES** TO **SACCHAROMYCES** CEREVISIAE; CELL DIFFERENTIATION WITH ENZYME-LINKED IMMUNOASSAY OF POLYCLONAL ANTIBODIES
(B2) METHOD AND APPARATUS FOR DISTINGUISHING CROHN'S DISEASE FROM ULCERATIVE COLITIS AND OTHER GASTROINTESTINAL DISEASES BY DETECTING THE PRESENCE OF **FECAL ANTIBODIES** TO **SACCHAROMYCES** CEREVISIAE; CELL DIFFERENTIATION WITH ENZYME-LINKED IMMUNOASSAY OF POLYCLONAL ANTIBODIES

7/8/46 (Item 1 from file: 345) **Links**
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IPC: G01N-033/564; G01N-033/53; G01N; G01N-0033/569; G01N-033/569

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      Set  Items  Description
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? s measurement?/ti and human?/ti and feces?/ti
          161618  MEASUREMENT?/TI
          483023  HUMAN?/TI
            1379  FECES?/TI
      S1       2  MEASUREMENT?/TI AND HUMAN?/TI AND FECES?/TI
? t s1/6/all

 1/6/1
13052494   Genuine Article#: 813EK   Number of References: 0
Title: Measurement of anti-neutrophil cytoplasmic antibodies (ANCA)
    in human feces as an indicator of ulcerative colitis
Publication date: 20040400


 1/6/2
11025298   Genuine Article#: 597PR   Number of References: 0
Title: Measurement of anti-Saccharomyces cerevisiae antibodies in
    human feces as a indicator of Crohn's disease
Publication date: 20020900
? t s1/9/2

 1/9/2
DIALOG(R)File  34:SciSearch(R) Cited Ref Sci
(c) 2007 The Thomson Corp. All rts. reserv.

11025298   Genuine Article#: 597PR   Number of References: 0
Title: Measurement of anti-Saccharomyces cerevisiae antibodies in
    human feces as a indicator of Crohn's disease
Author(s): Boone JH; Sandborn WJ; Pelanne LMH; Lyerly DM
Corporate Source: Techlab Inc,Res & Dev,Blacksburg//VA/; Mayo
    Clin,Rochester//MN/
Journal: AMERICAN JOURNAL OF GASTROENTEROLOGY, 2002, V97, N9,S (SEP), P
    S253-S253
ISSN: 0002-9270   Publication date: 20020900
Publisher: ELSEVIER SCIENCE INC, 360 PARK AVE SOUTH, NEW YORK, NY
    10010-1710 USA
Language: English   Document Type: MEETING ABSTRACT
Meeting Abstract Number: 771
Geographic Location: USA
Journal Subject Category: GASTROENTEROLOGY & HEPATOLOGY
? logoff hold
       10jan07 14:24:19 User228206 Session D2668.3
           $17.55    0.705 DialUnits File34
               $0.00  2 Type(s) in Format  6
               $7.23  1 Type(s) in Format  9
            $7.23  3 Types
    $24.78  Estimated cost File34
     $0.26  TELNET
    $25.04  Estimated cost this search
    $25.06  Estimated total session cost   1.063 DialUnits
Logoff: level 05.15.00 D  14:24:19


Connecting via Winsock to Dialog


Logging in to Dialog

Trying 31060000009998...Open

DIALOG INFORMATION SERVICES
PLEASE LOGON:
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    (c) 2003 Dialog, a Thomson business.      All rights reserved.

      /H = Help            /L = Logoff          /NOMENU = Command Mode


Enter an option number to view information or to connect to an online
 service.  Enter a BEGIN command plus a file number to search a database
(e.g., B1 for ERIC).
? b 410

       09jan07 14:56:34 User228206 Session D2665.1
            $0.00    0.245 DialUnits FileHomeBase
     $0.00  Estimated cost FileHomeBase
     $0.00  Estimated cost this search
     $0.00  Estimated total session cost   0.245 DialUnits

File 410:Dialog Comm.-of-Interest Newsl/Jul (c) 2006 Dialog

      Set  Items  Description
      ---  -----  -----------
? set hi ;set hi
HILIGHT set on as ''
HILIGHT set on as ''
? b 155 medicine patents
>>>         138 is unauthorized
>>>         351 is unauthorized
>>>         352 is unauthorized
>>>3 of the specified files are not available
       09jan07 14:56:42 User228206 Session D2665.2
            $0.00    0.117 DialUnits File410
     $0.00  Estimated cost File410
     $0.03  TELNET
     $0.03  Estimated cost this search
     $0.03  Estimated total session cost   0.362 DialUnits

SYSTEM:OS  - DIALOG OneSearch
  File 155:MEDLINE(R) 1950-2006/Dec 06
         (c) format only 2006 Dialog
*File 155: MEDLINE has temporarily stopped updating with UD=20061206.
Please see HELP NEWS154 for details.
  File   5:Biosis Previews(R) 1969-2007/Dec W5
         (c) 2007 The Thomson Corporation
  File  34:SciSearch(R) Cited Ref Sci 1990-2007/Dec W5
         (c) 2007 The Thomson Corp
  File  35:Dissertation Abs Online 1861-2006/Nov
         (c) 2006 ProQuest Info&Learning
  File  45:EMCare 2007/Dec W5
         (c) 2007 Elsevier B.V.
  File  65:Inside Conferences 1993-2007/Jan 09
         (c) 2007 BLDSC all rts. reserv.
  File  71:ELSEVIER BIOBASE 1994-2007/Jan W1
         (c) 2007 Elsevier B.V.
  File  73:EMBASE 1974-2007/Jan 09
         (c) 2007 Elsevier B.V.
*File  73: Elsevier will not provide an update to Embase on
January 1, 2007.
  File  91:MANTIS(TM) 1880-2006/Jan
         2001 (c) Action Potential
  File  94:JICST-EPlus 1985-2007/Jan W1
         (c)2007 Japan Science and Tech Corp(JST)
*File  94: UD200609W2 is the last update for 2006. UD200701W1 is the
first update for 2007. The file is complete and up to date.
  File  98:General Sci Abs 1984-2006/Dec
         (c) 2006 The HW Wilson Co.
```

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          203650  S2
           21087  ANCA?
      S3      32  (S1 OR S2) (100N) ANCA?
? rd

>>>Duplicate detection is not supported for File 123.

>>>Duplicate detection is not supported for File 324.

>>>Duplicate detection is not supported for File 331.

>>>Duplicate detection is not supported for File 340.

>>>Duplicate detection is not supported for File 342.

>>>Duplicate detection is not supported for File 344.

>>>Duplicate detection is not supported for File 345.

>>>Duplicate detection is not supported for File 347.

>>>Duplicate detection is not supported for File 348.

>>>Duplicate detection is not supported for File 349.

>>>Duplicate detection is not supported for File 353.

>>>Duplicate detection is not supported for File 371.

>>>Duplicate detection is not supported for File 447.

>>>Duplicate detection is not supported for File 652.

>>>Duplicate detection is not supported for File 654.

>>>Duplicate detection is not supported for File 670.

>>>Records from unsupported files will be retained in the RD set.
      S4      24  RD  (unique items)
? t s4/6/all

 4/6/1     (Item 1 from file: 155)
13536605   PMID: 11818981
  [Ascariasis: comparison of the therapeutic efficacy between paico and
albendazole in children from Huaraz]
  Ascaridiasis: Comparacion de la eficacia terapeutica entre paico y
albendazol en ninos de Huaraz.
Jul-Sep 2001


 4/6/2     (Item 2 from file: 155)
11975848   PMID: 9805923
  [A case of MPO-ANCA-related vasculitis that recurred as gastrointestinal
bleeding and presented difficulty in treatment]
Sep 1998


 4/6/3     (Item 3 from file: 155)
11531069   PMID: 9365154
  Anti-neutrophil cytoplasmic antibodies in inflammatory bowel disease with
special attention for IgA-class antibodies.
Oct 1997


 4/6/4     (Item 4 from file: 155)
```